

81682859

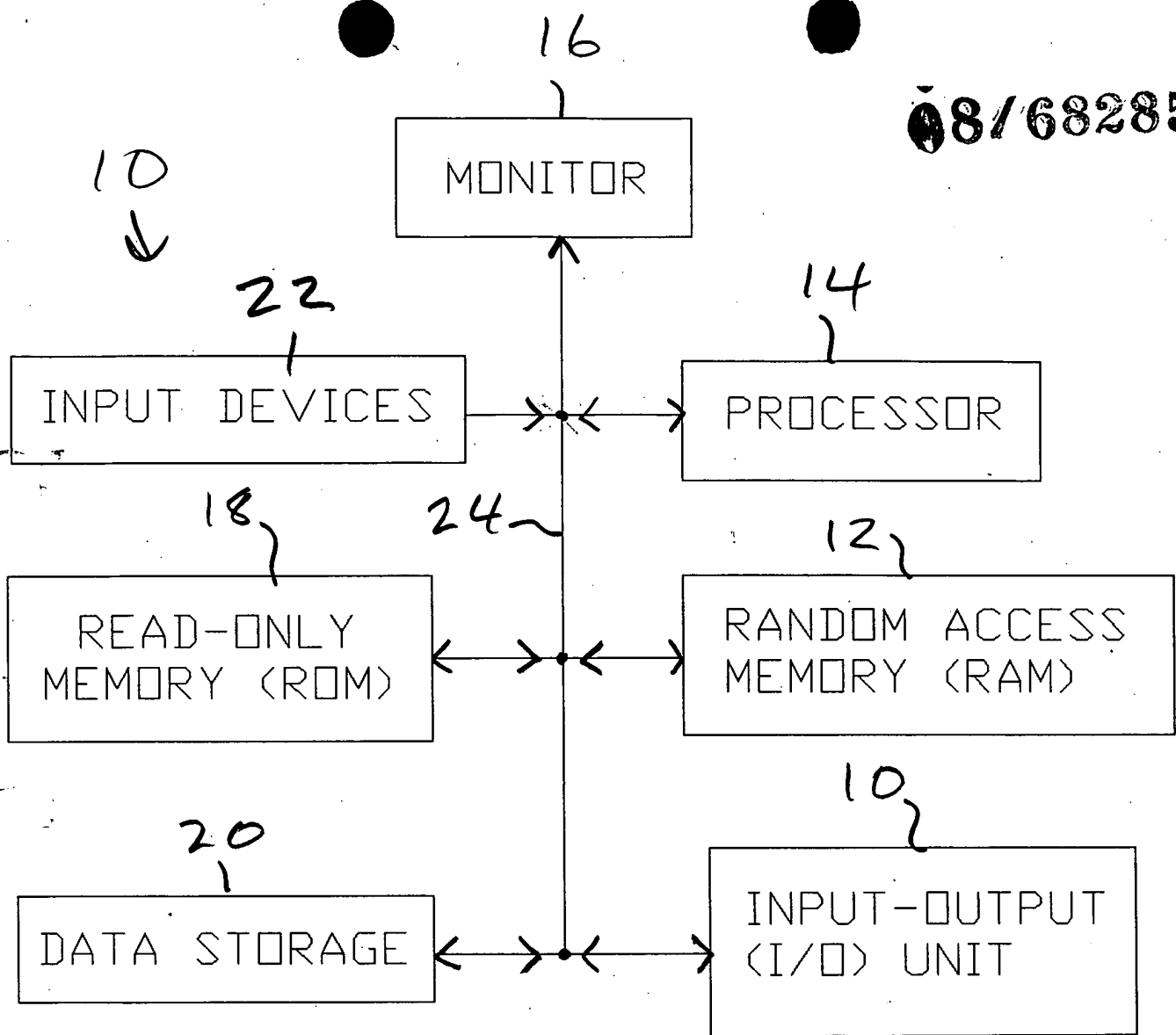


Fig. 1

12
1

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RANDOM ACCESS MEMORY

30

OPERATING SYSTEM

32

C-PROGRAM

32a-

HIGH LEVEL INSTRUCTIONS

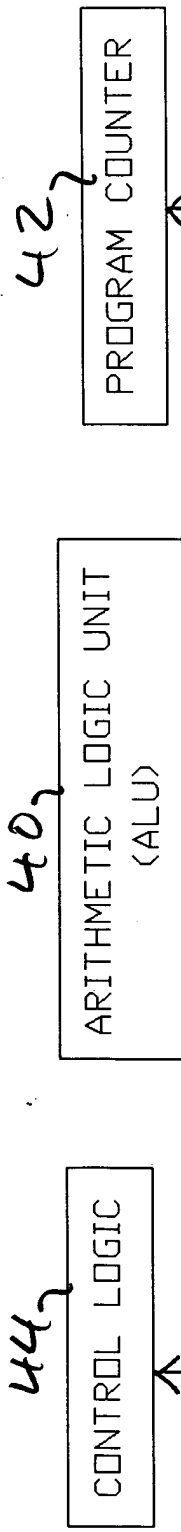
32b-

MACHINE CODE ARRAY

Fig. 2

147

CENTRAL PROCESSING UNIT (CPU)



467

OUTPUT REGISTERS	INPUT REGISTERS	LOCAL REGISTERS	GLOBAL REGISTERS
O ₀	I ₀	L ₀	G ₀
O ₁	I ₁	L ₁	G ₁
⋮	⋮	⋮	⋮
O ₇	I ₇	L ₇	G ₇

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Fig. 3

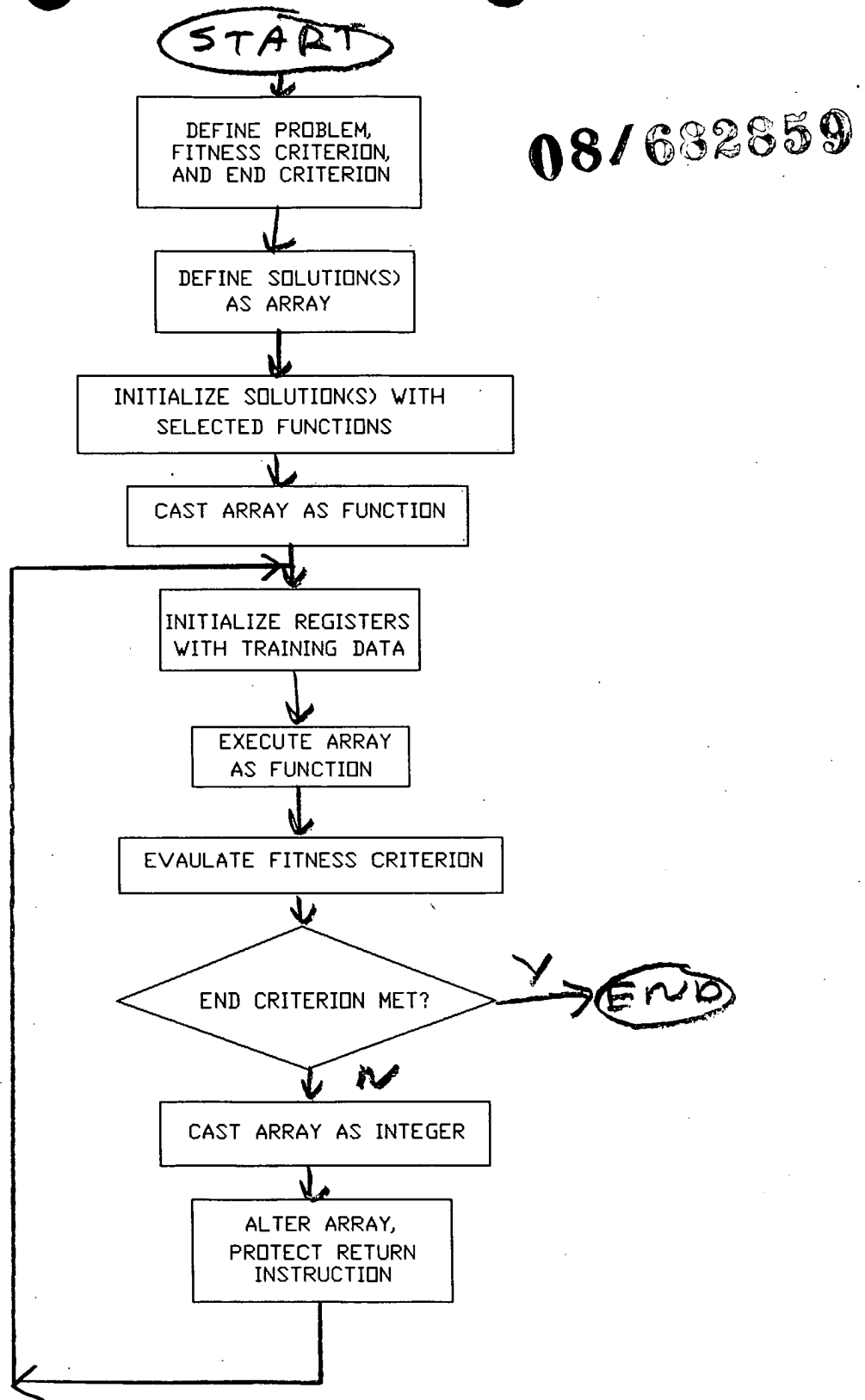


Fig. 4

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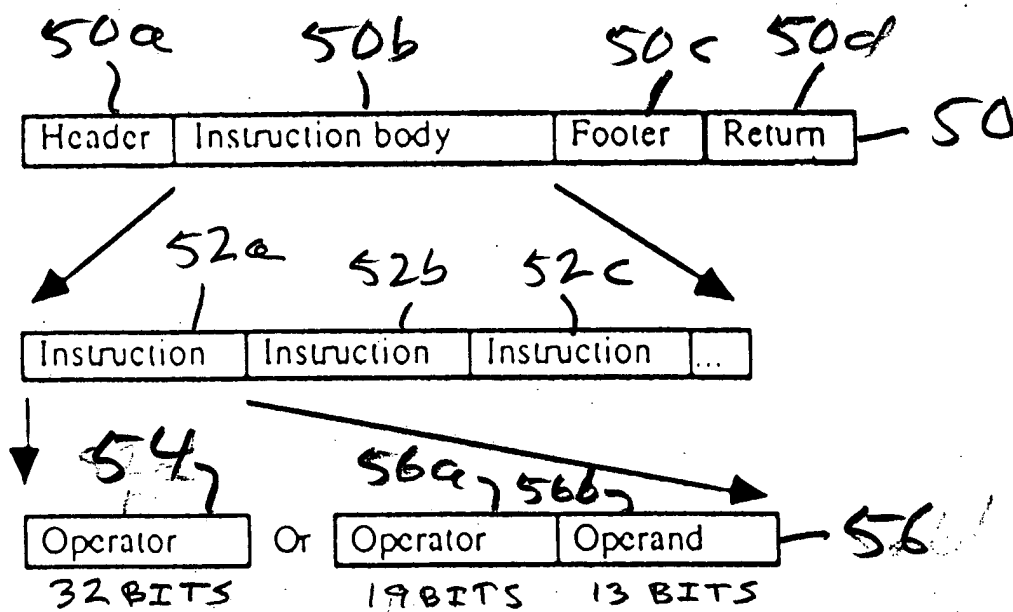


Fig. 5

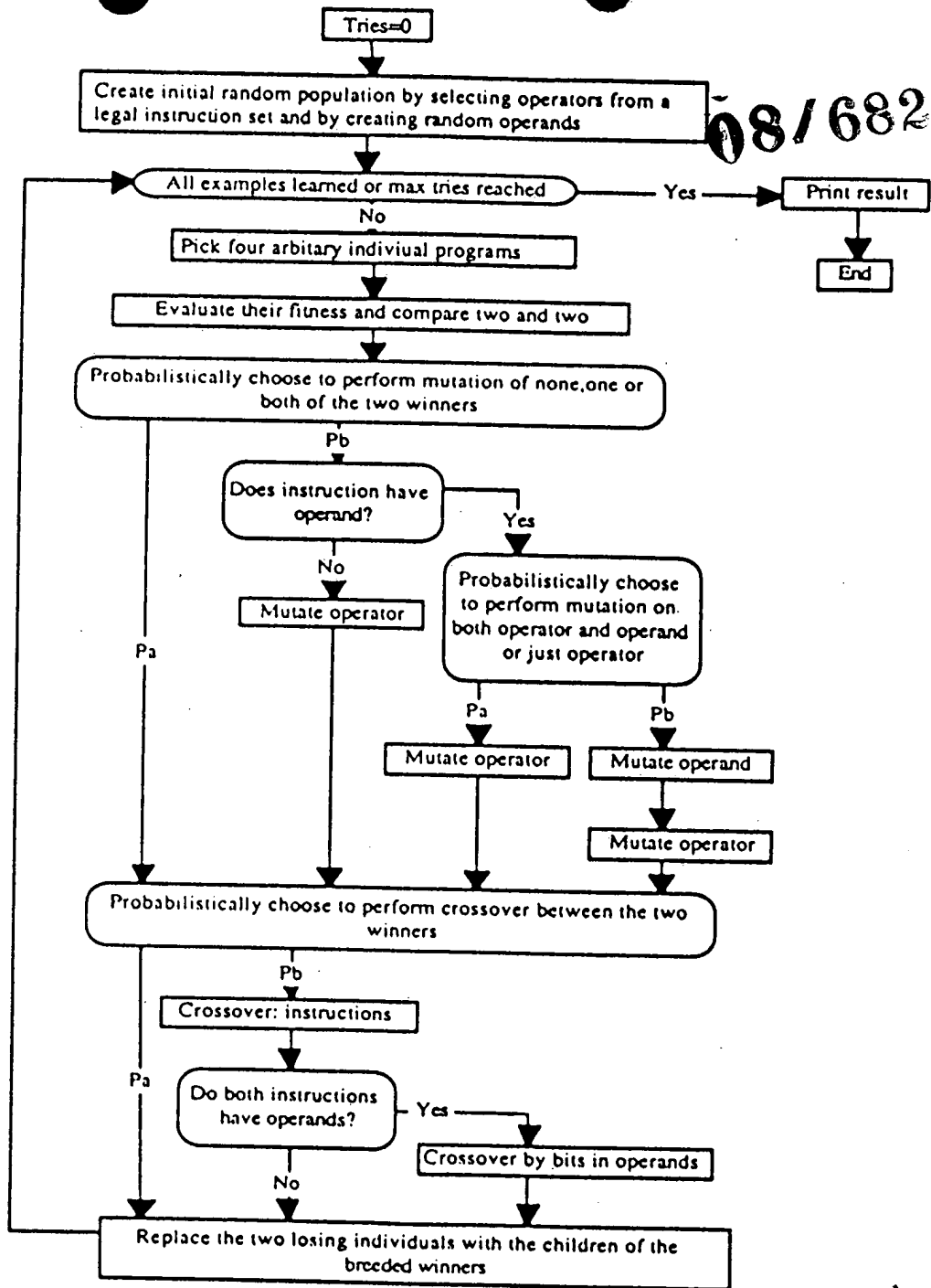


Fig. 6

60
↓

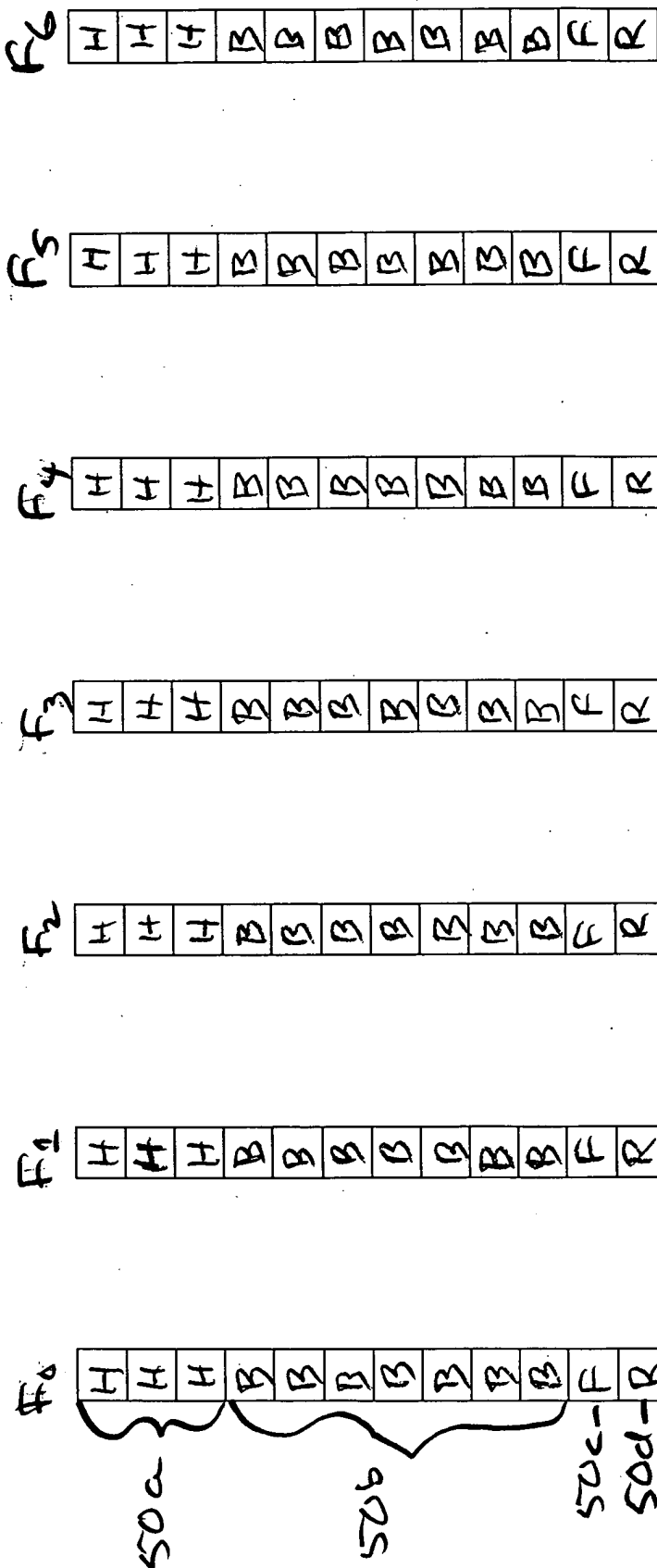
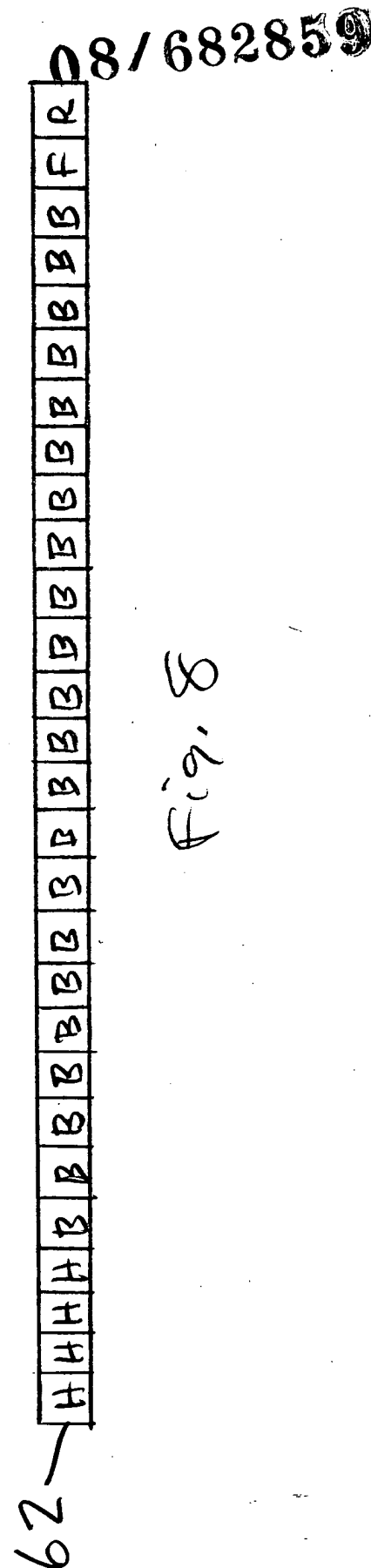


Fig. 7



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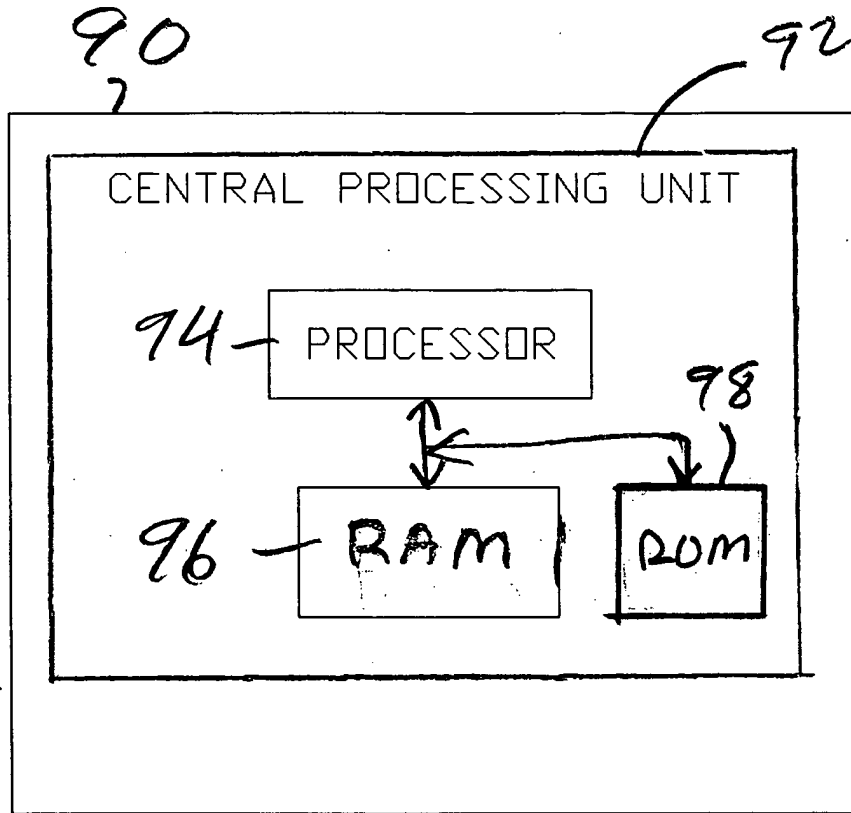
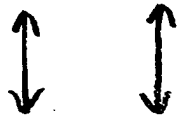


Fig. 9

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PARENTS

70- H 1 3 4 2 7 F R



72- H 6 8 5 9 4 8 3 F R

Fig. 10a

CHILDREN

70'- H 1 3 5 9 7 F R

72'- H 6 8 4 2 4 8 3 F R

Fig. 10b

08/682859

PARENTS

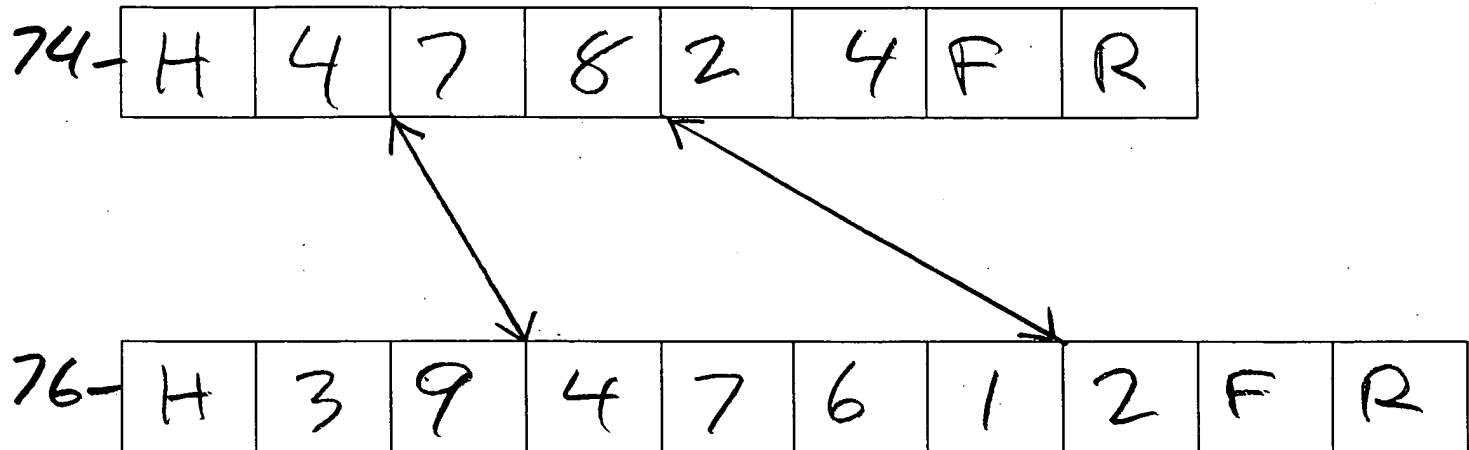


Fig. 11a

CHILDREN

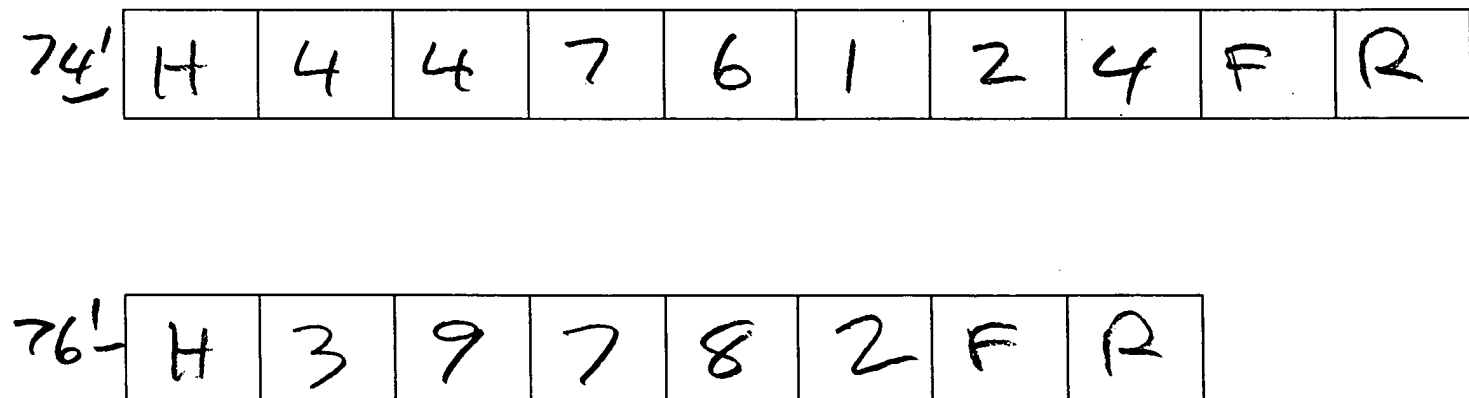


Fig. 11b

PARENTS

08/682859

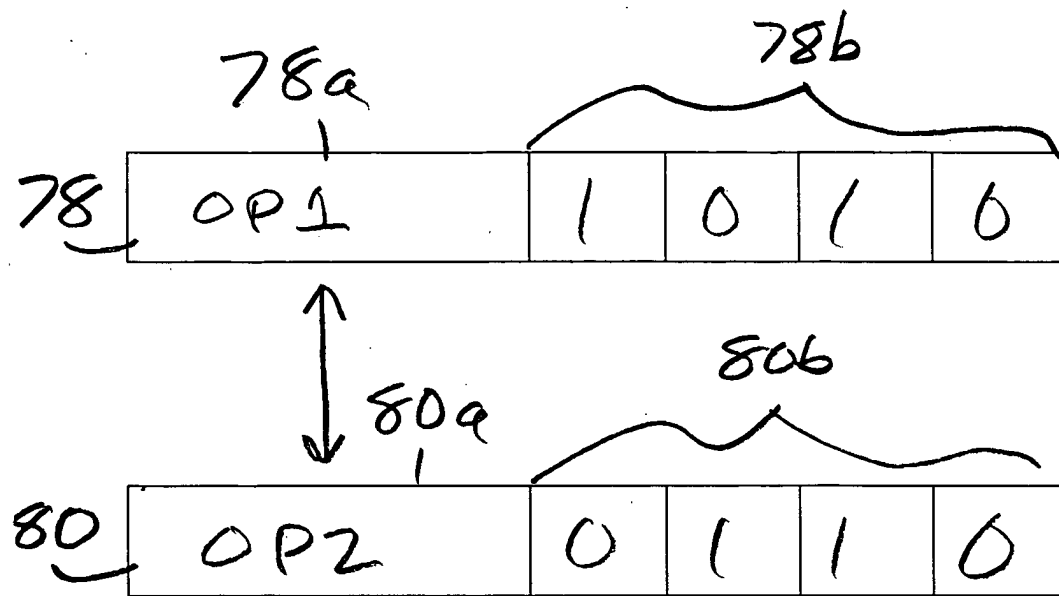


Fig. 12a

CHILDREN 78b

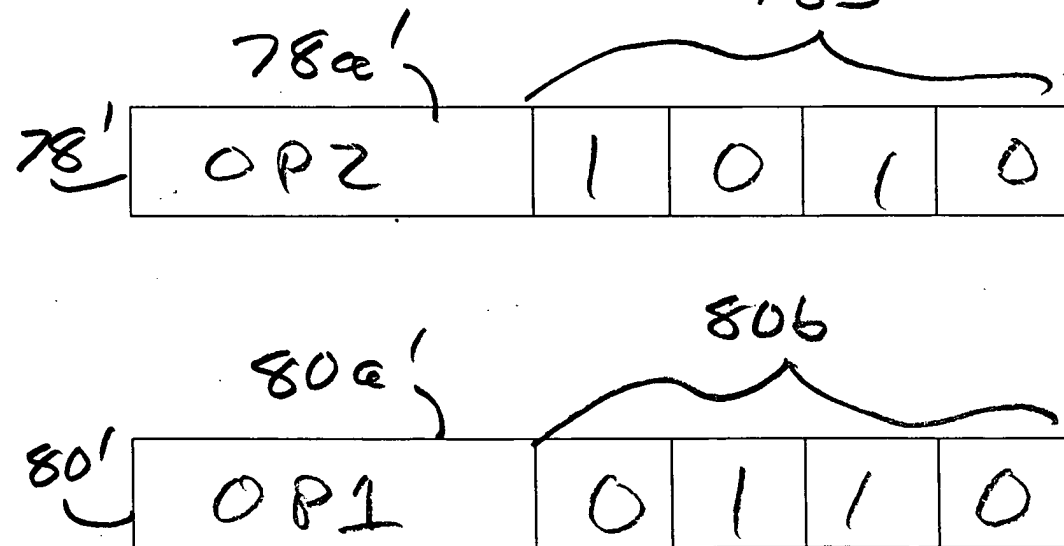


Fig. 12b

PARENTS
82b

08/682859

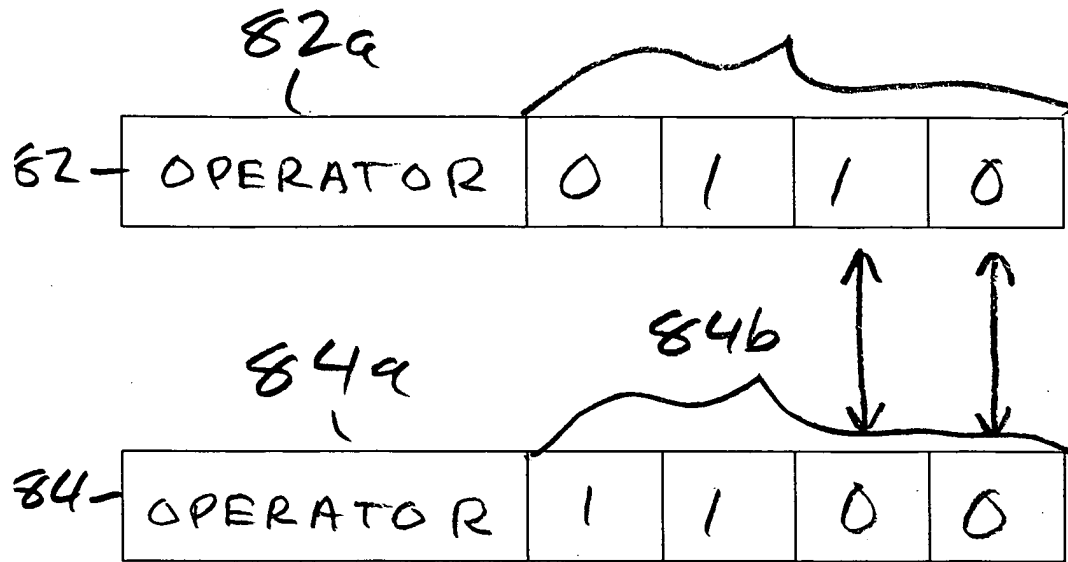


Fig. 13a

CHILDREN

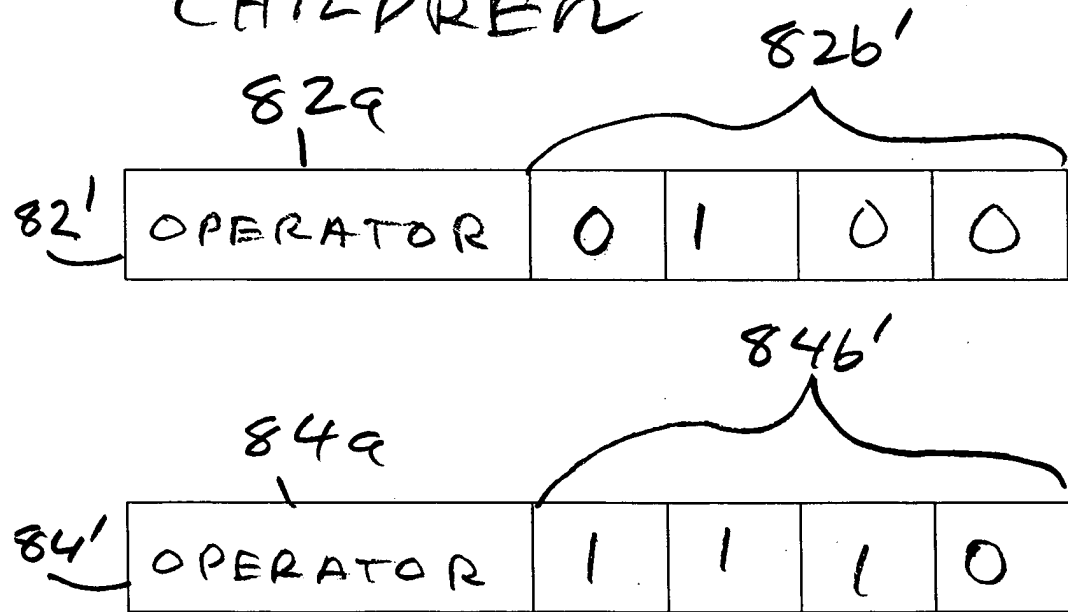


Fig. 13b

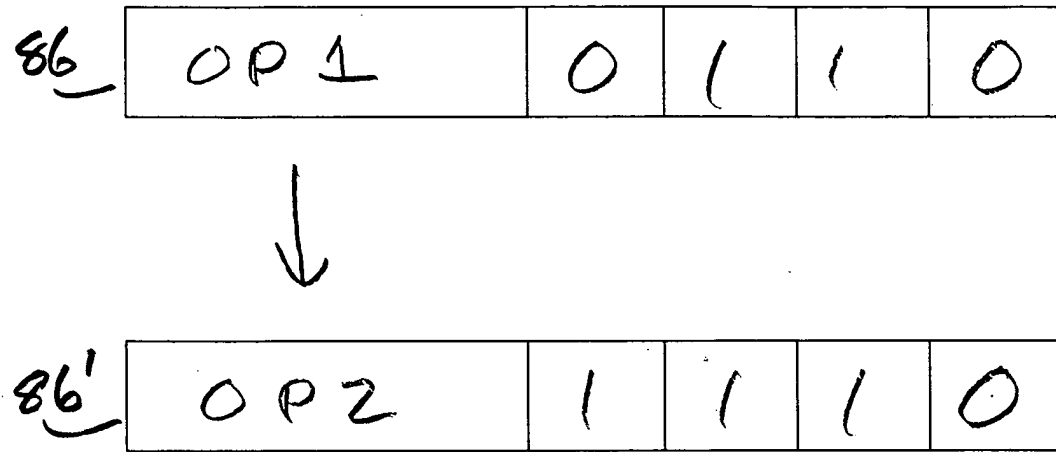


Fig. 14

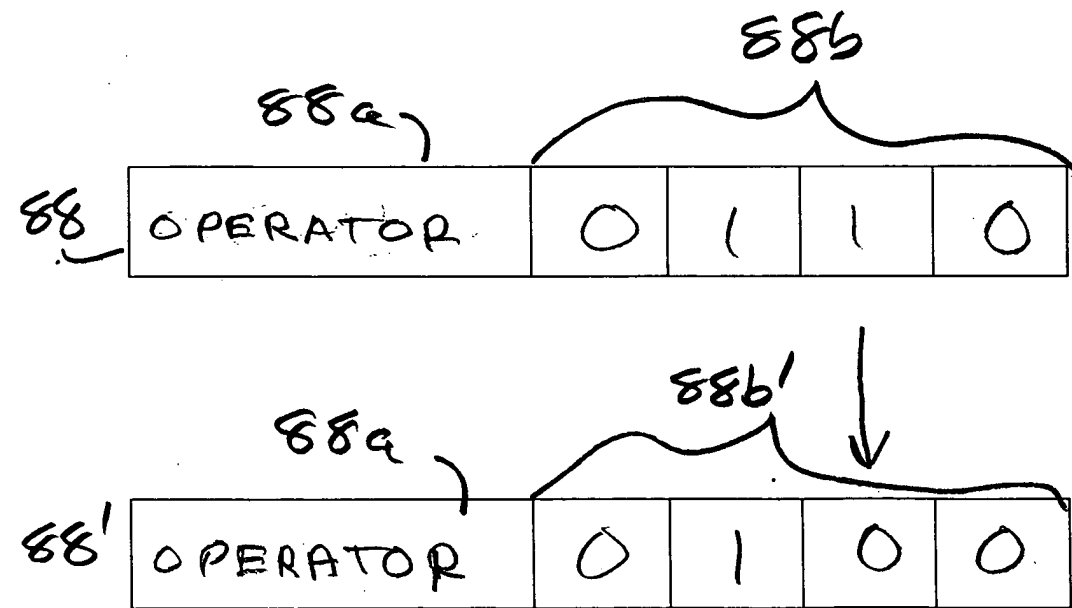


Fig. 15

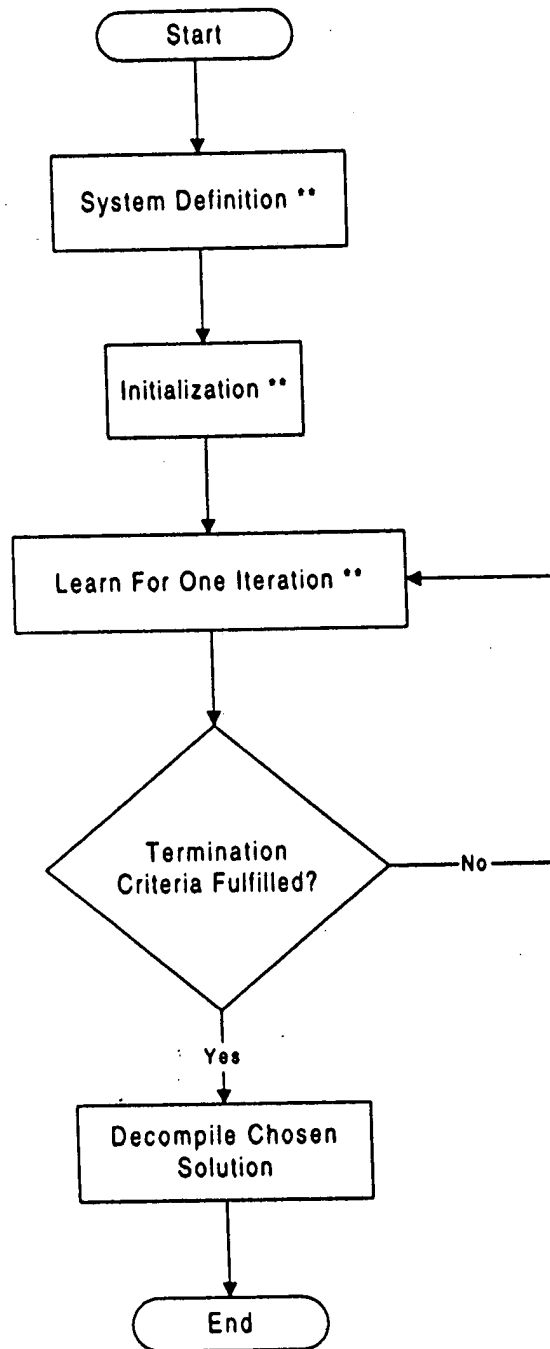


Figure 16a

General Operation of
the System

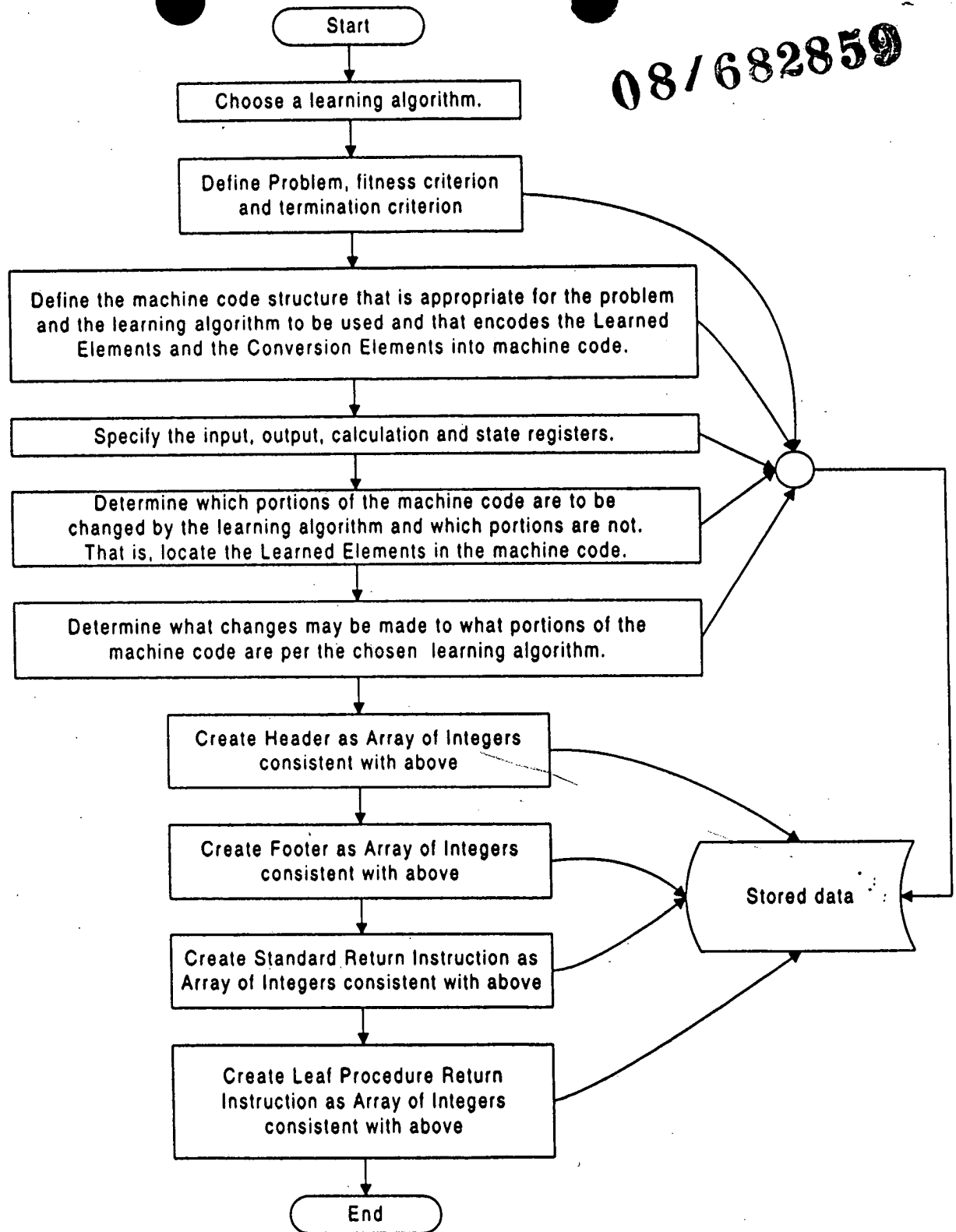


Figure 16b

Details of
System Refinement

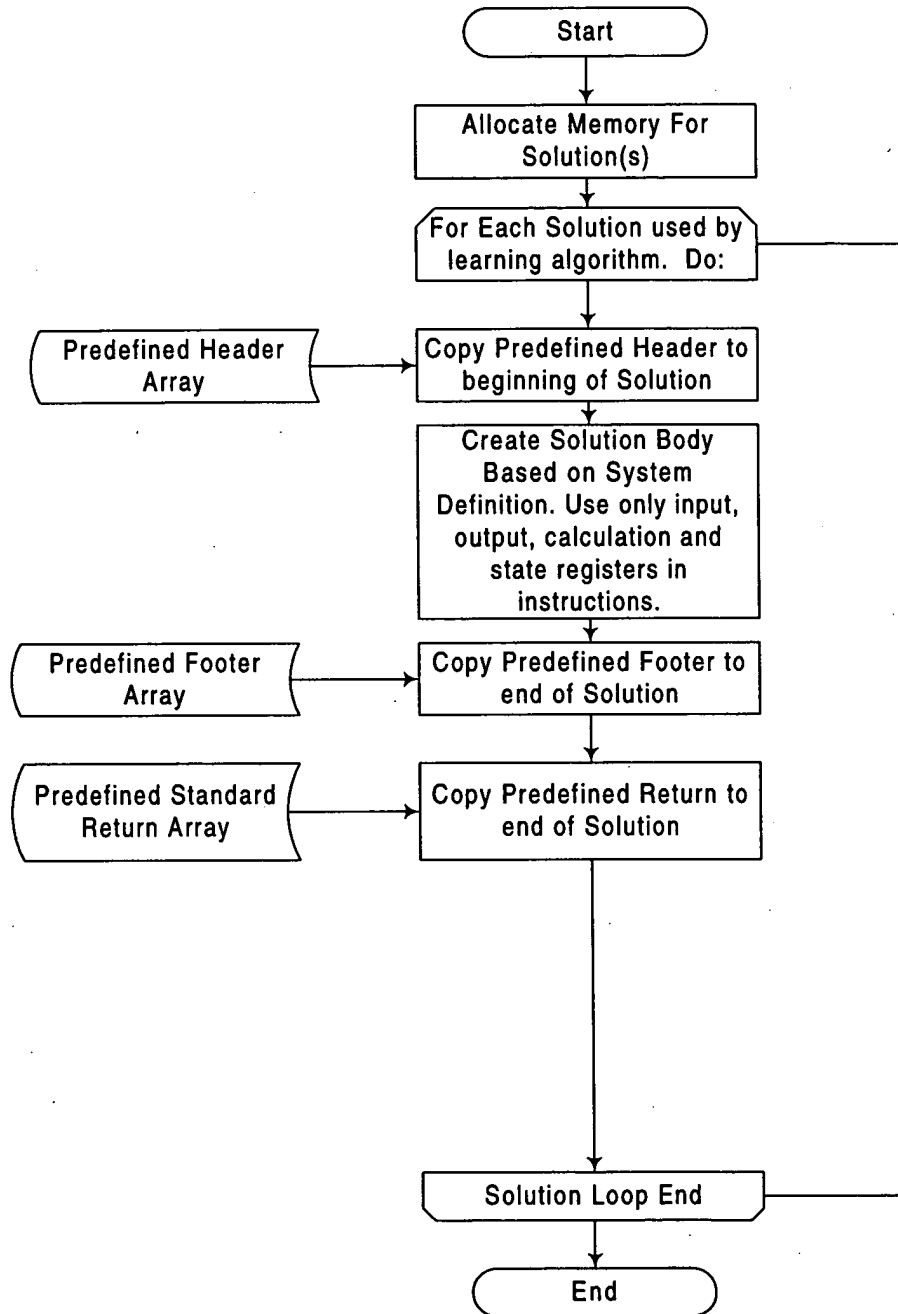
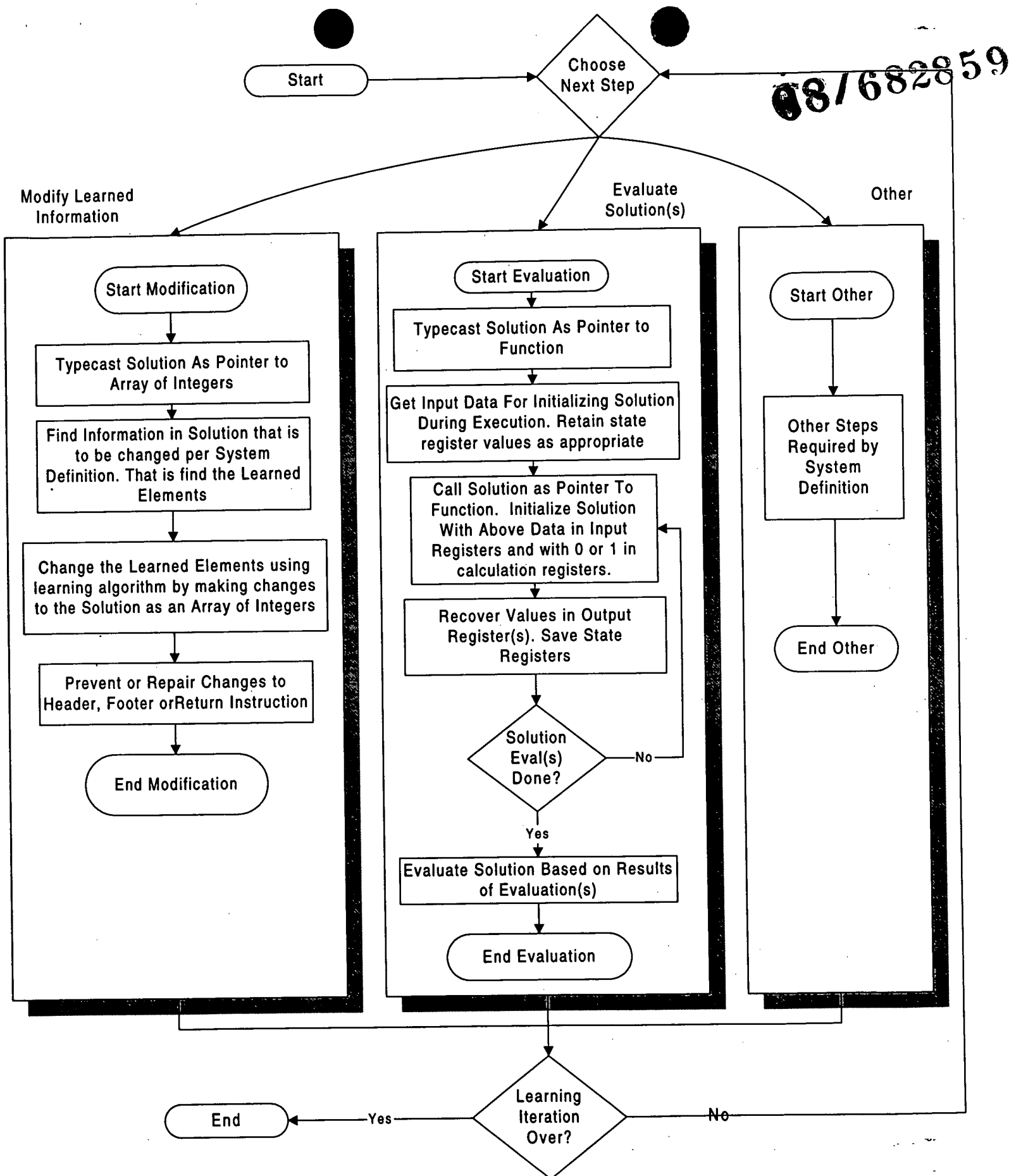


Figure 16c

Initialization

"Solution" means entity or individual



Solution means entity or individual

Figure 16d

Learn for One Iteration

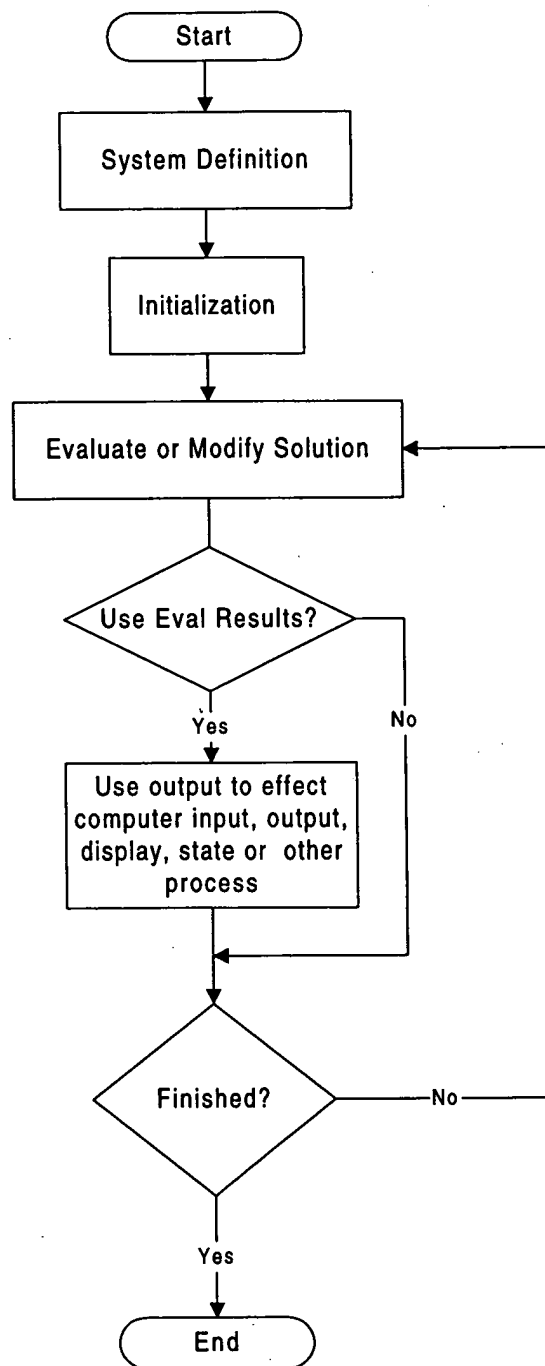


Figure 17a

General Operation of the Invention As Repetitive Computation System

"Solution" means entity or individual

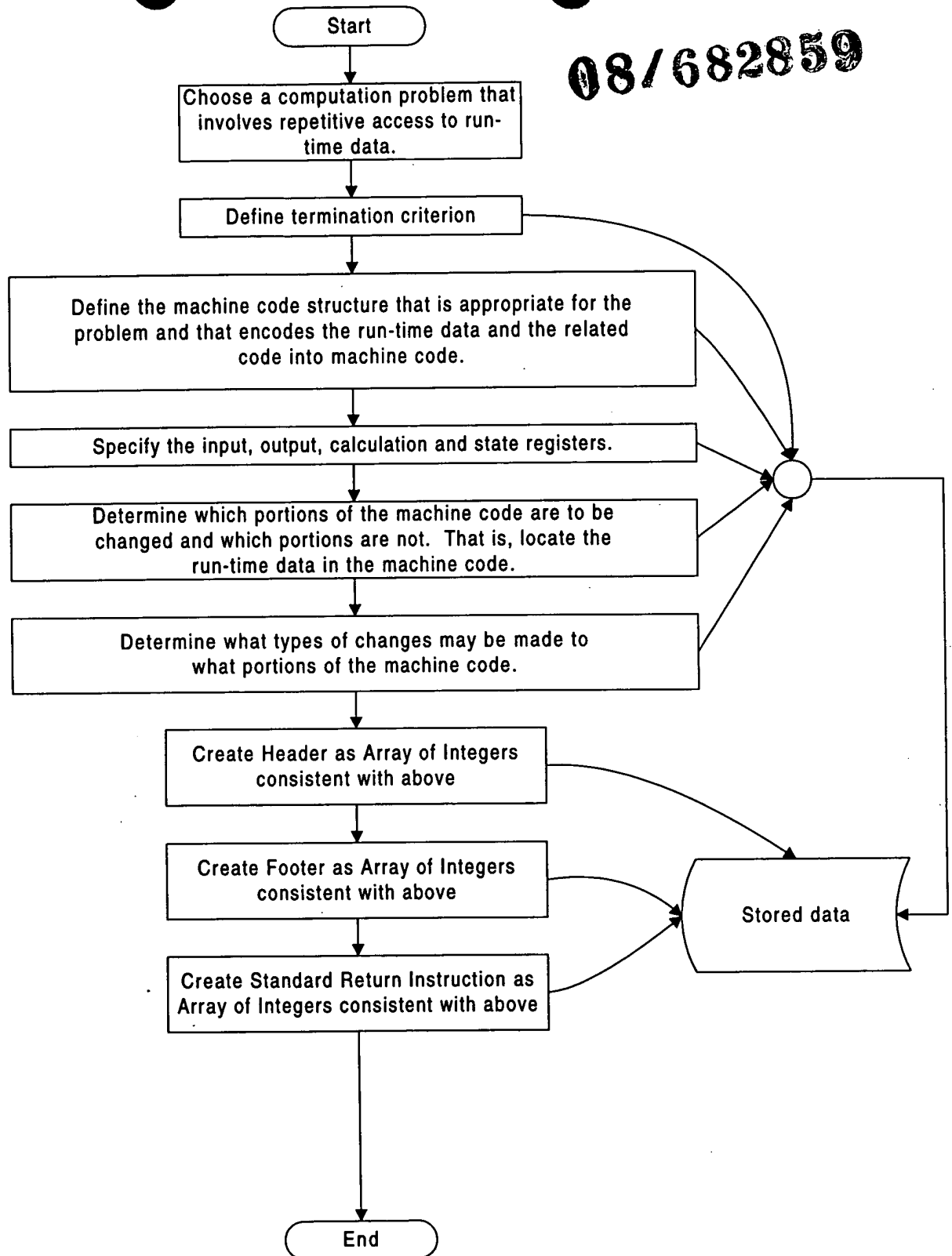


Figure 17b

System Definition

Solution means entity or individual

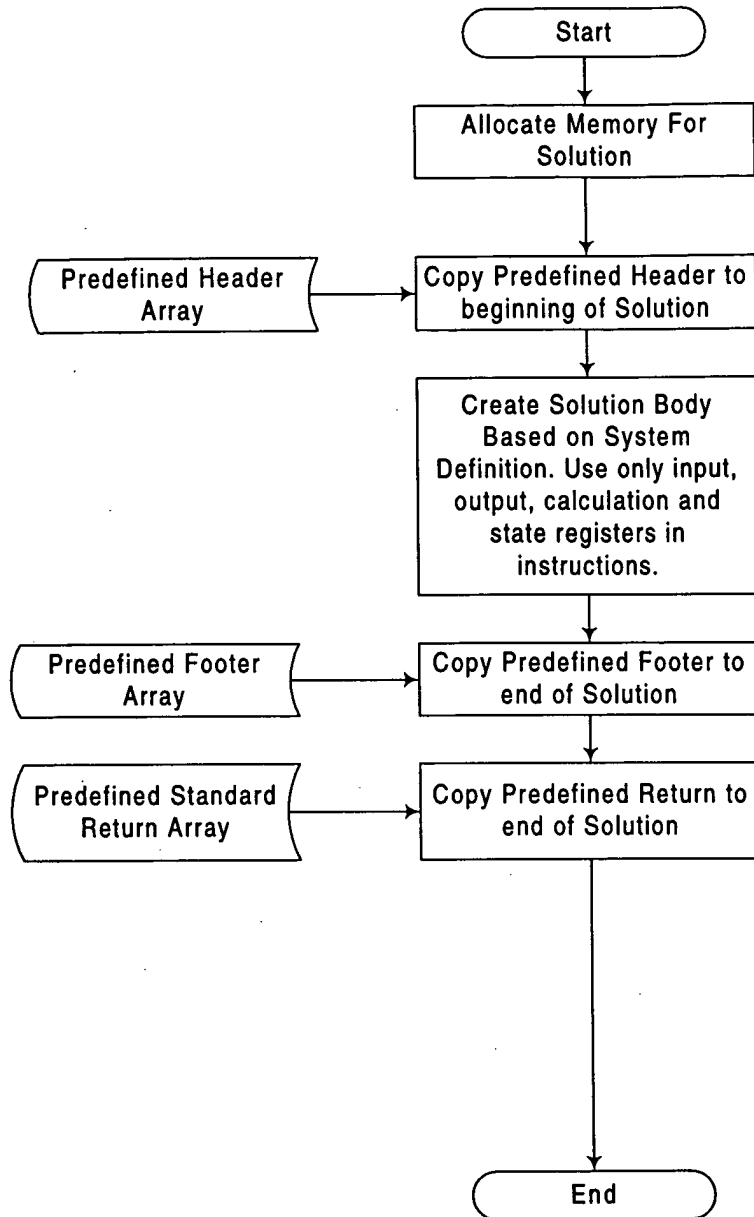
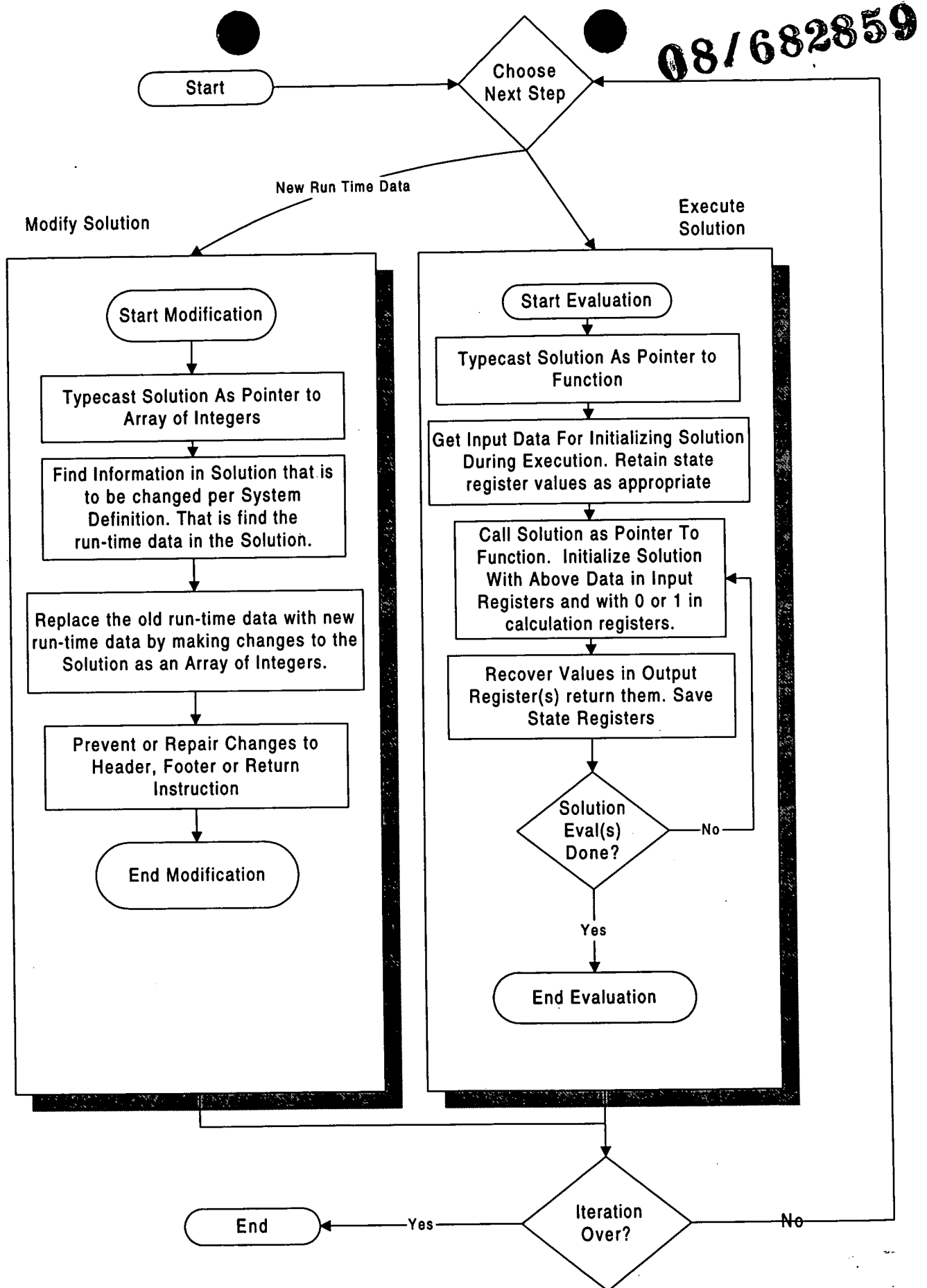


Figure 17c

Initialization

"Solution" means entity or individual



"Solution" means entity or individual

Figure 17d

Evaluate or Modify Function

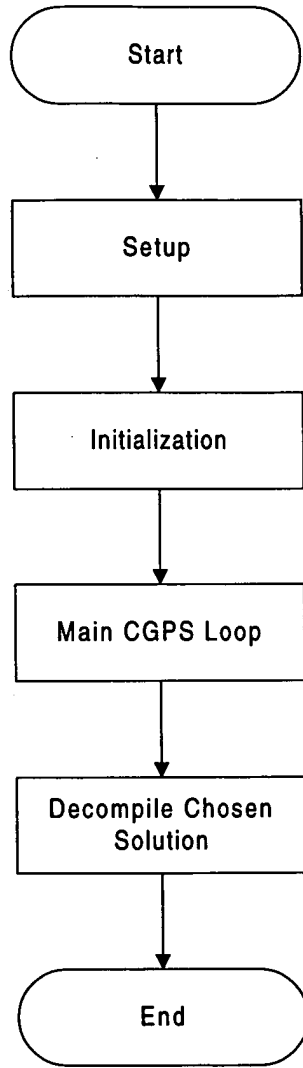


Figure 18a

08/682859

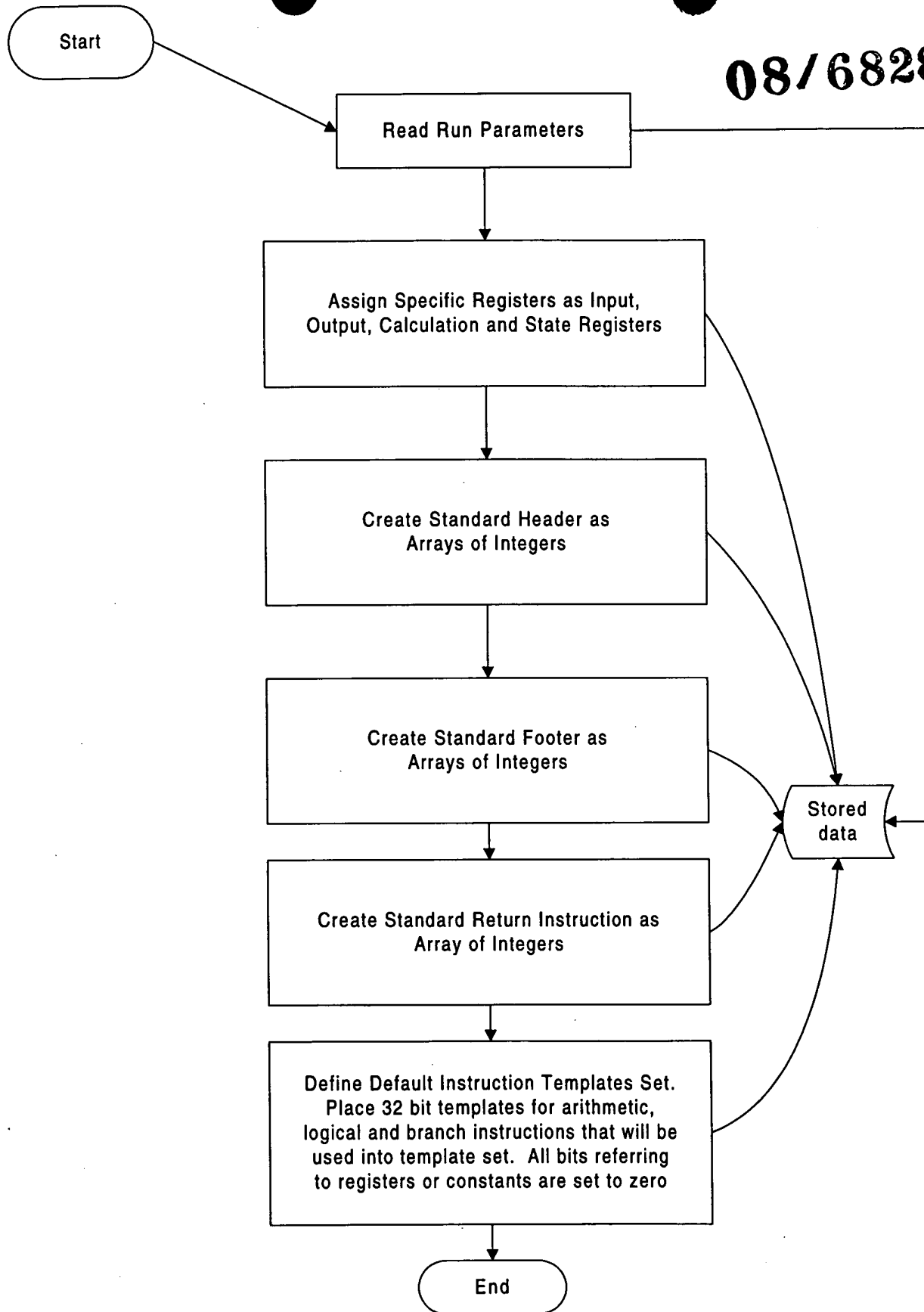


Figure 18b

Setup

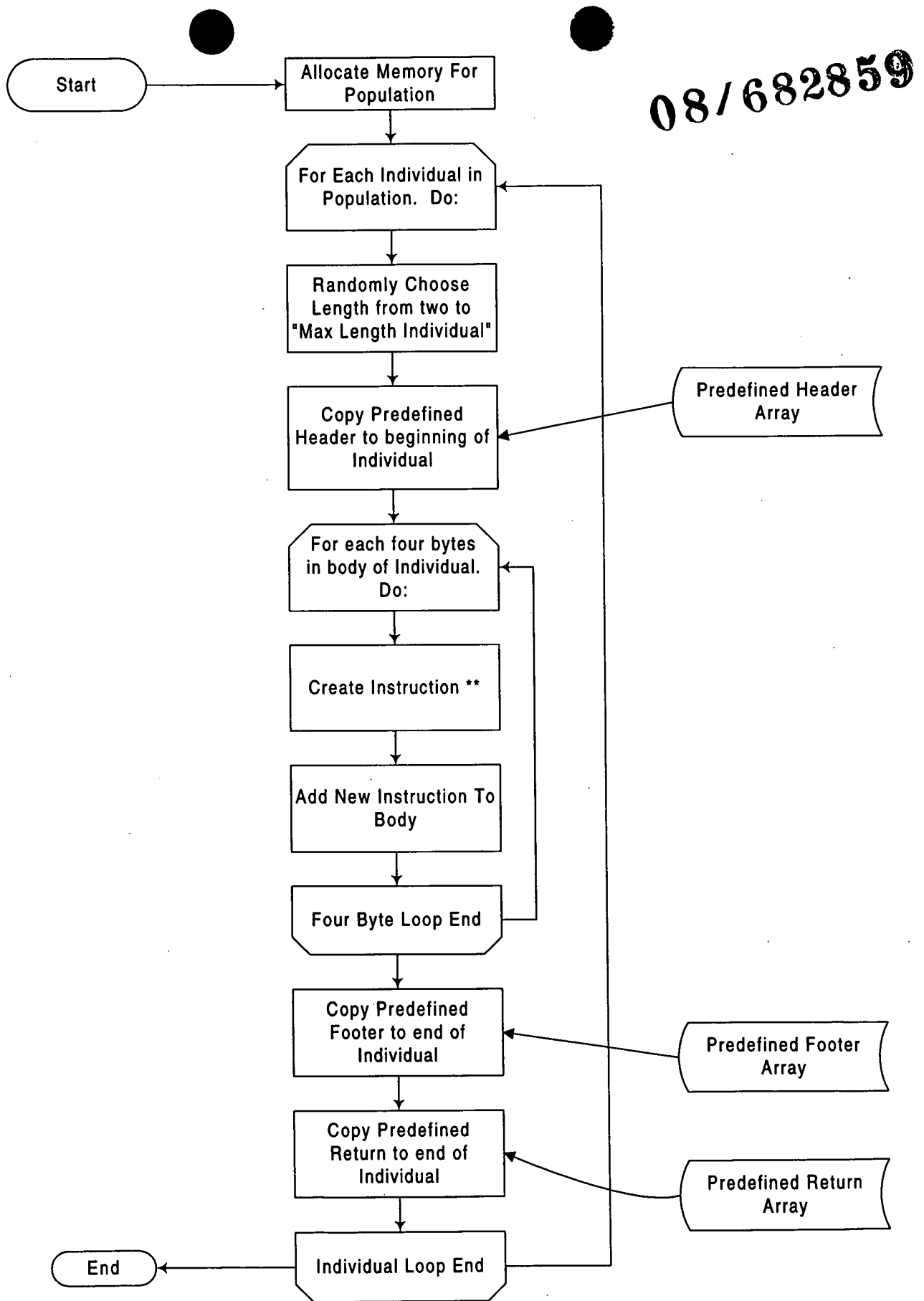


Figure 18c

Initialization

08/682859

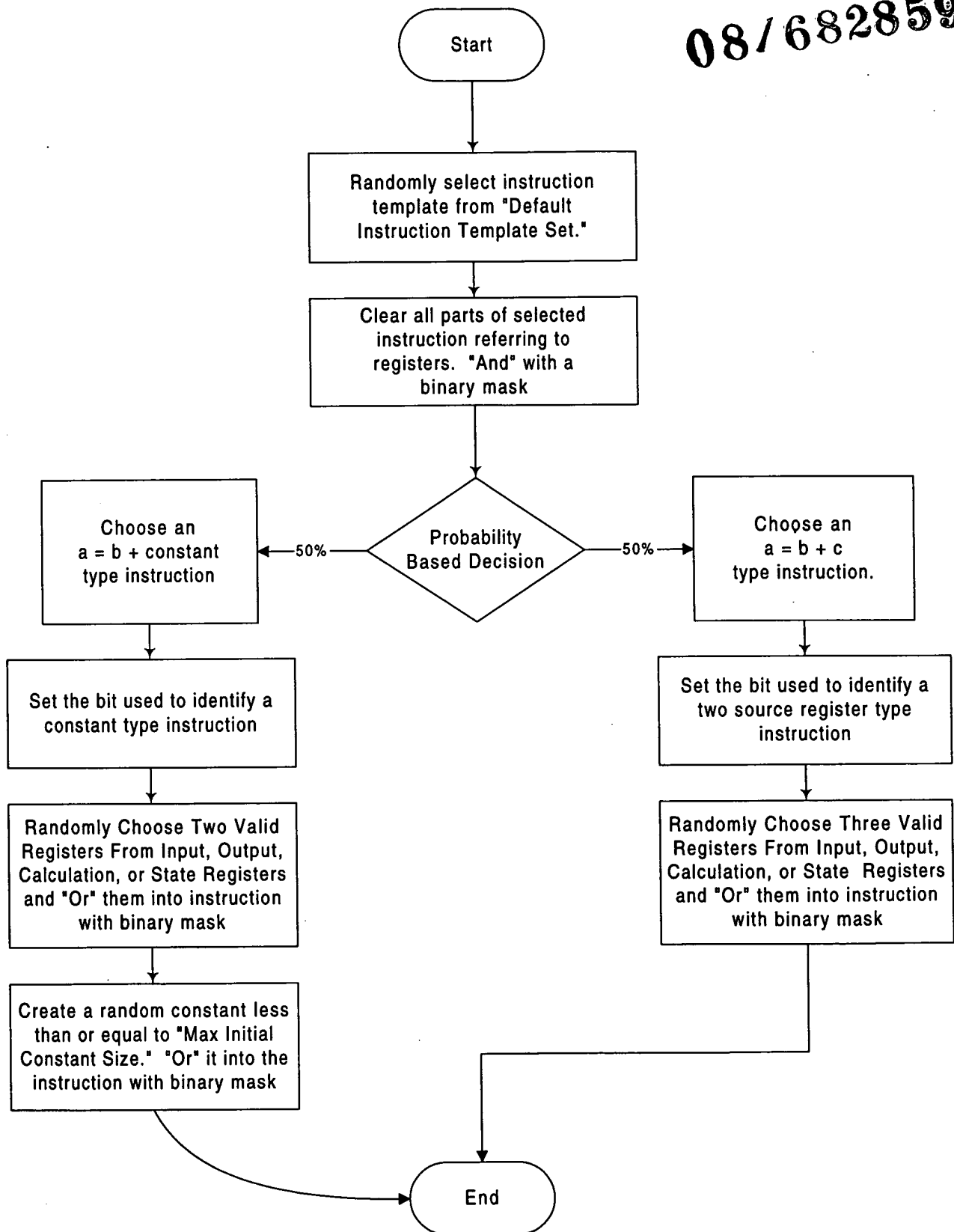


Figure 18d

Create Instruction

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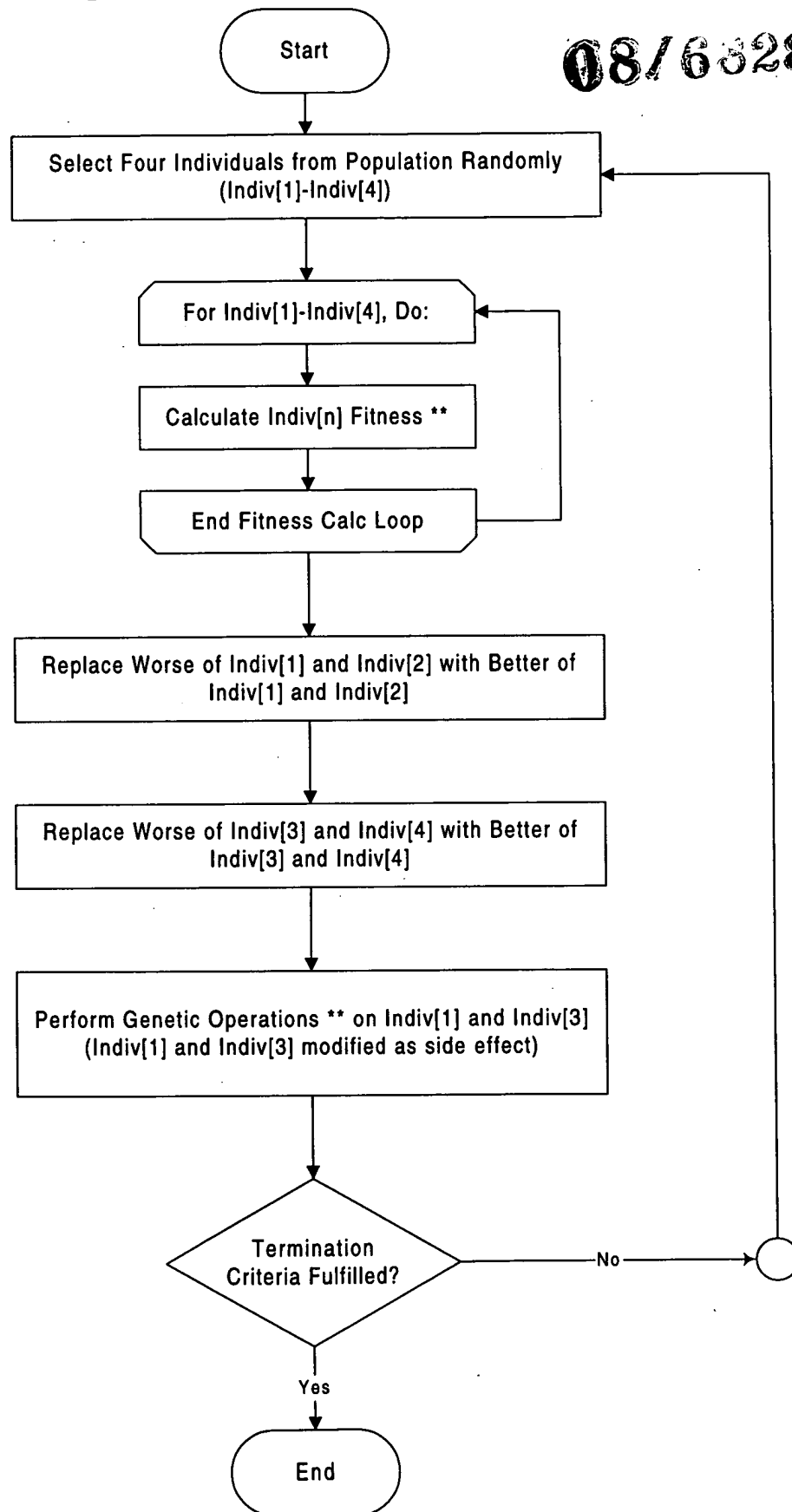


Figure 18e

Main CGPS Loop

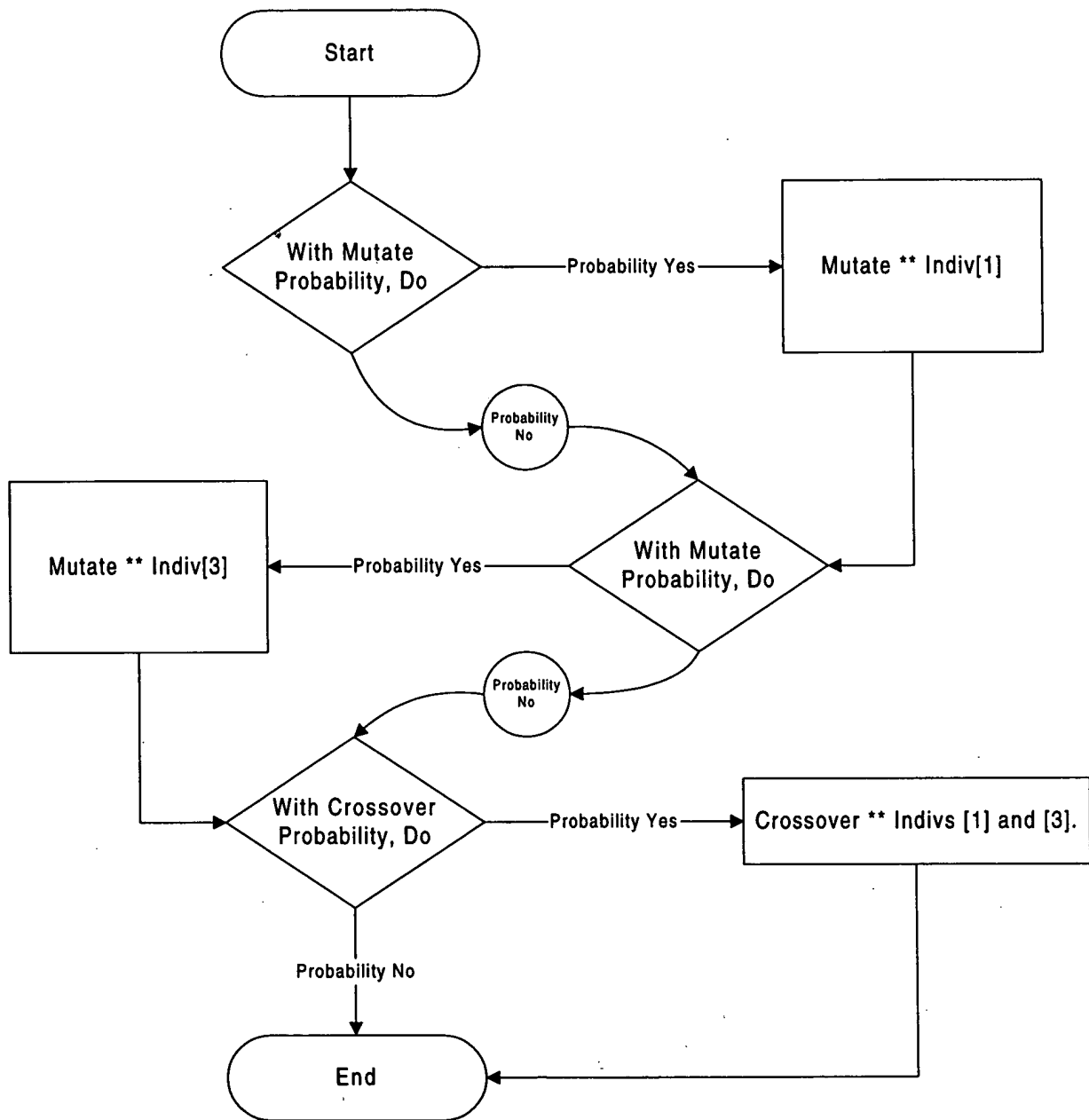


Figure 18g

Perform Genetic Operations

08/682859

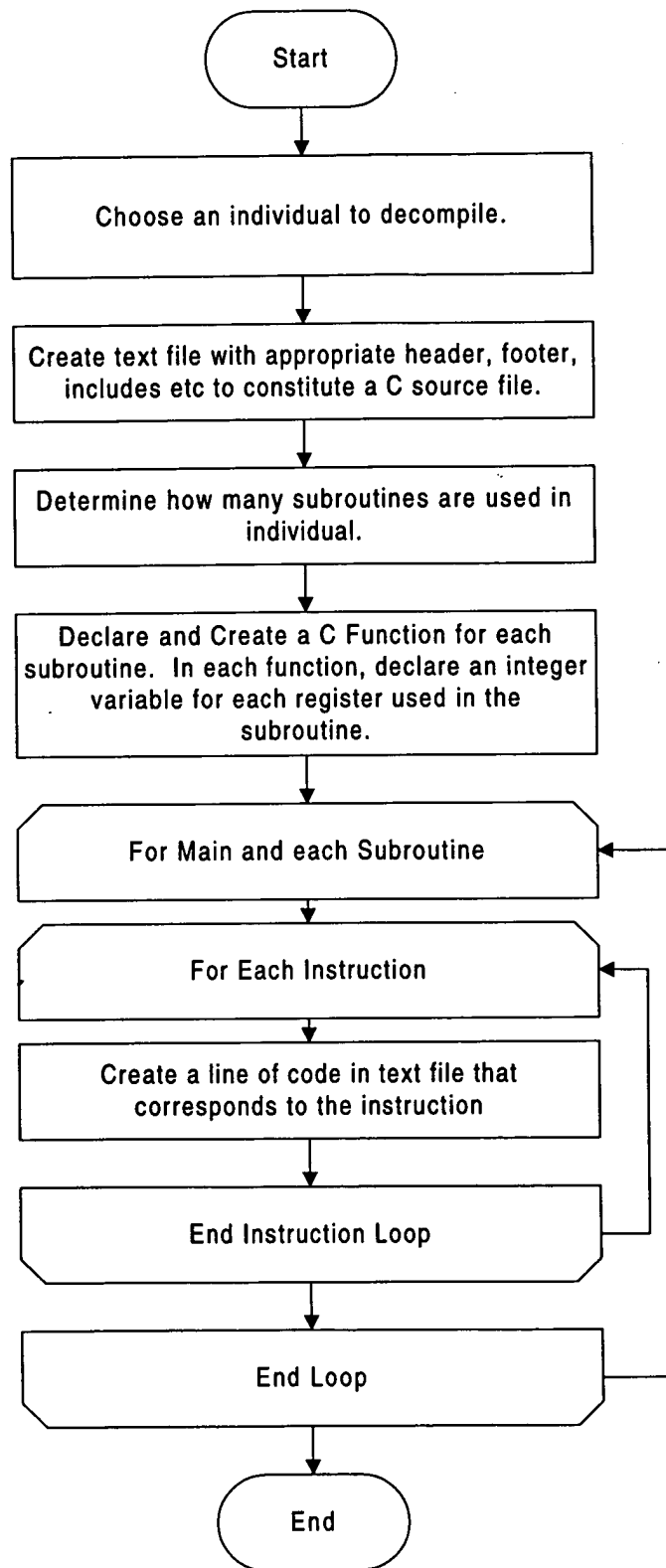


Figure 18h

FUNCTION

BANK 0

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ad0

SAVE
L0=ad1
L1=ad2
L2=ad3
I0=I1*2
O0=I0
CALL L0
I0=O0
CALL L2
.
.
RETURN

MAIN

I0	a=b*2
I1	b
I2	c
I3	d
I4	
I5	
I6	
I7	

O0	a=b*2
O1	
O2	
O3	
O4	
O5	
O6	
O7	

ad1

SAVE
L0=ad2
L1=ad3
L2=ad4
call L1
call L2
.
RETURN

SUB1

BANK 0

L0	ad1
L1	ad2
L2	ad3
L3	
L4	
L5	
L6	
L7	

ad2

SAVE
L0=ad3
L1=ad4
L2=ad4
I1=I0+b
call L1
.
.
.
.
RETURN

SUB2

LEAF

ad3	NOP
	TEST I1
	I3=I2/I1
	RETURN

DUMMY

ad4	RETURN
-----	--------

Fig. 20

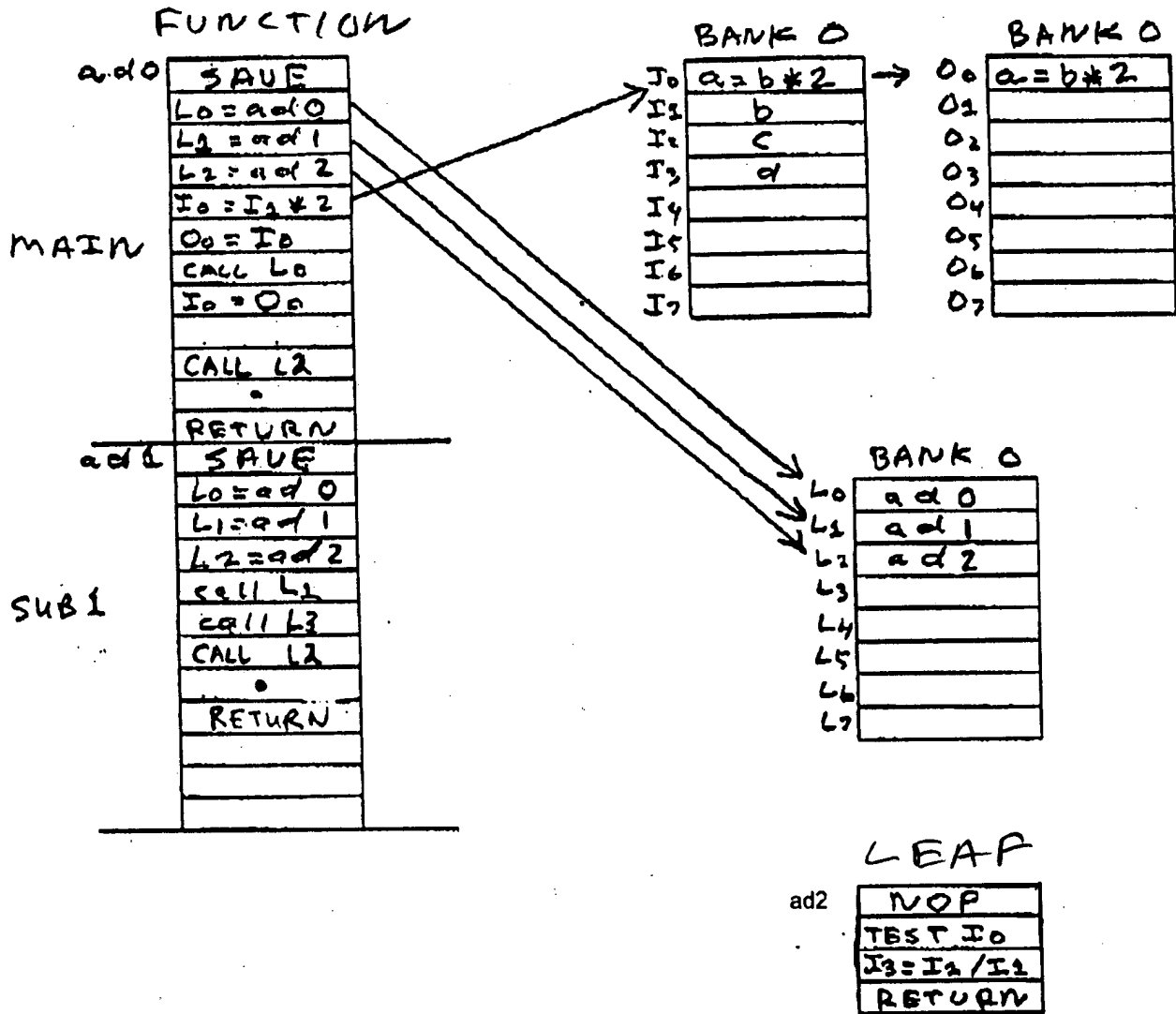


Fig. 21

08/30/859

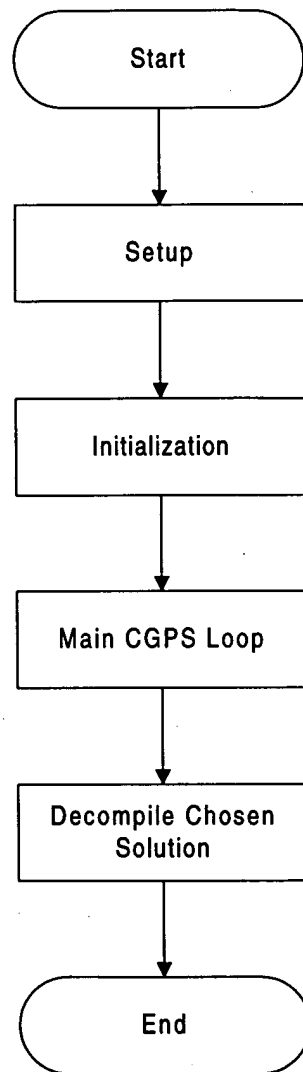


Figure 22a

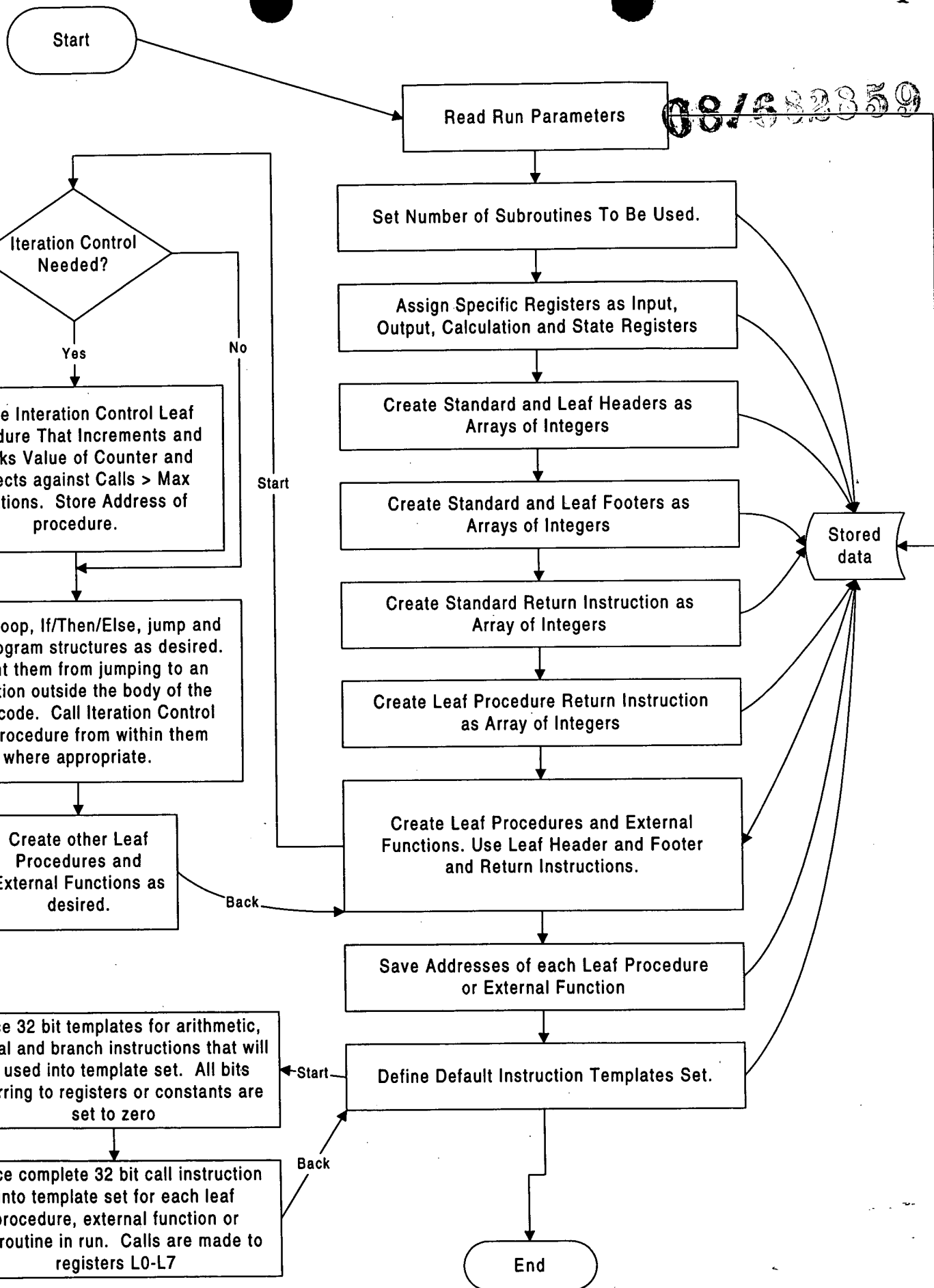


Figure 22b

** Indicates that additional
detail is available on
another flowchart

08/632859

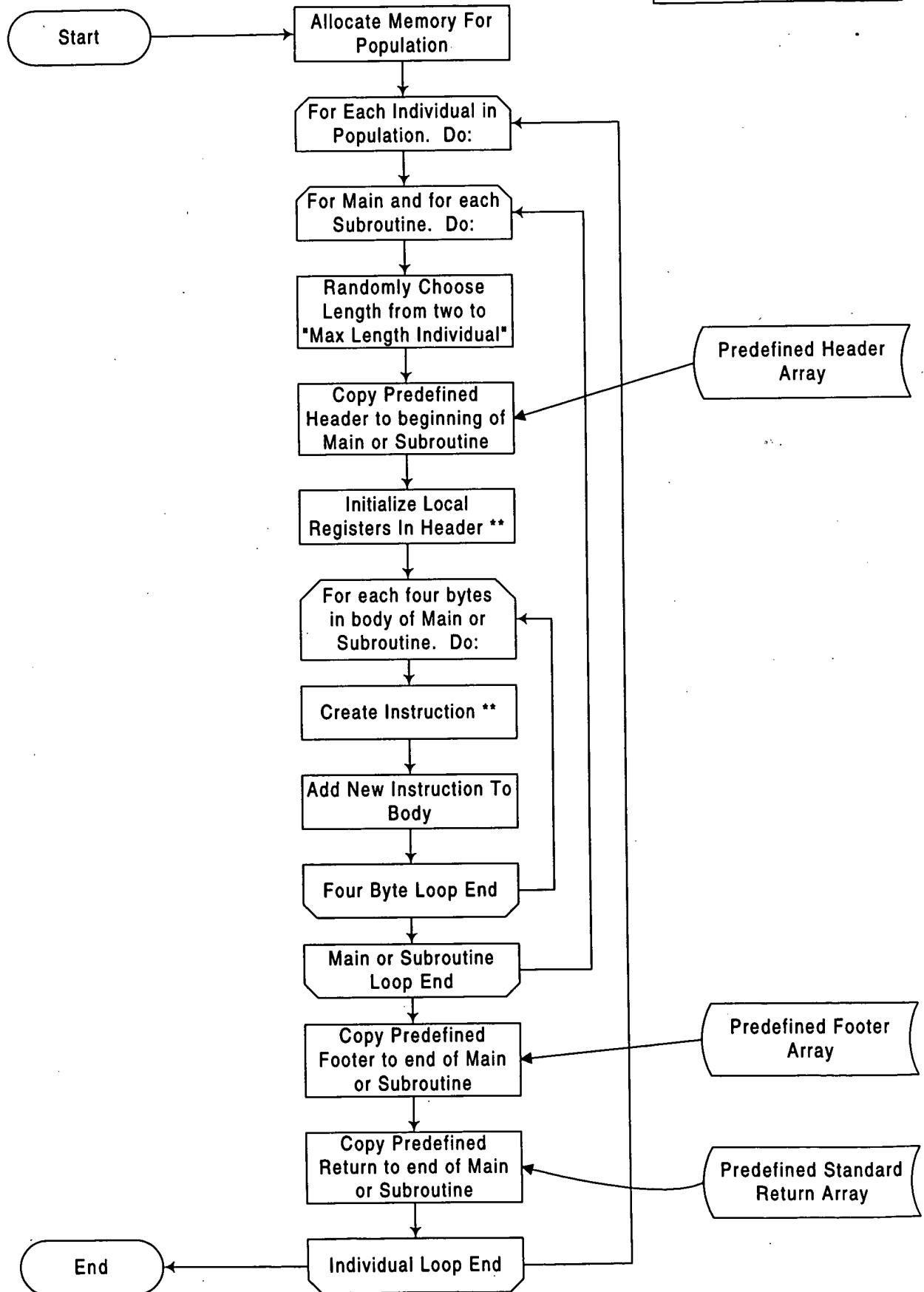


Figure 22c

08/682859

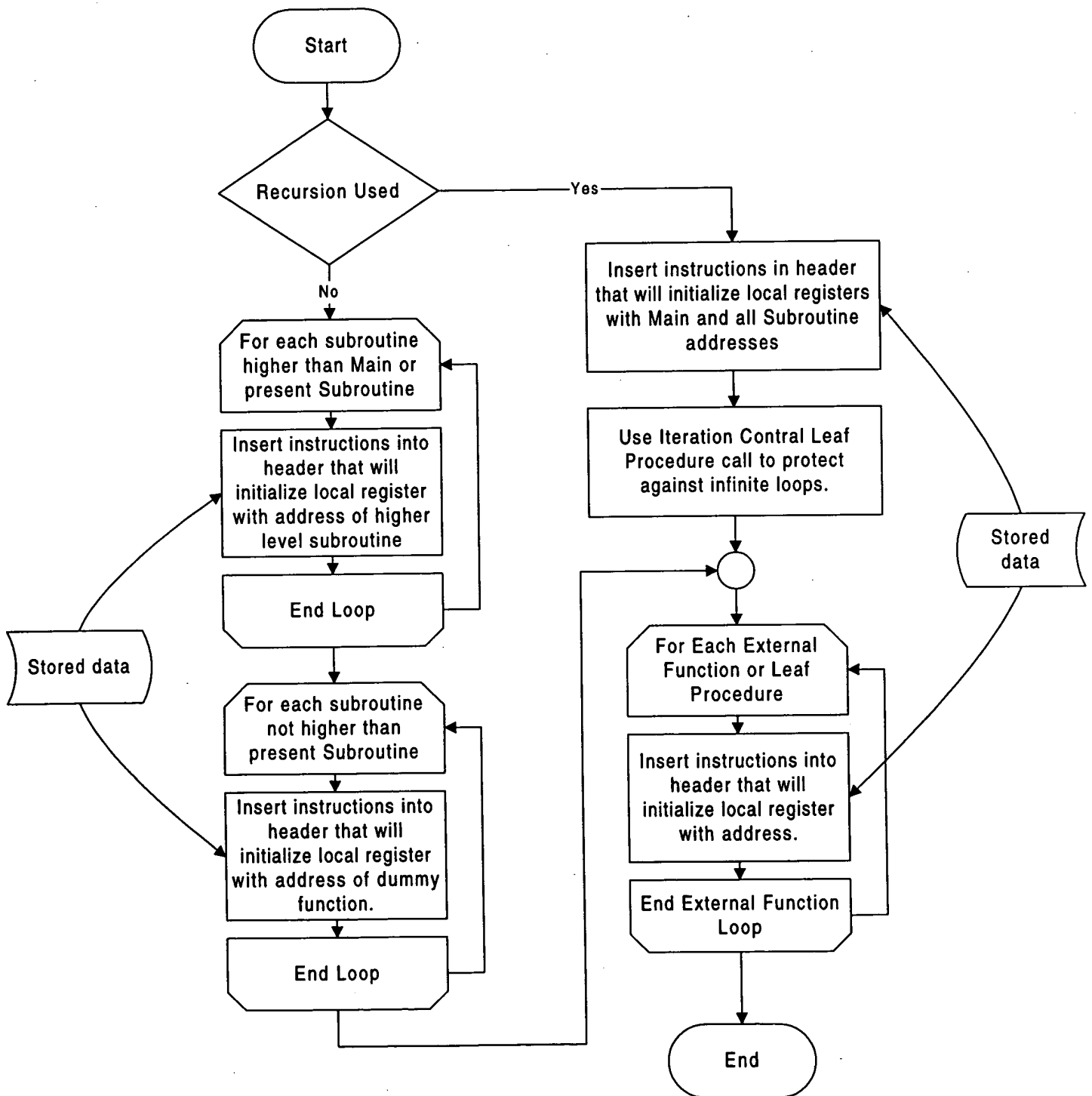


Figure 22d

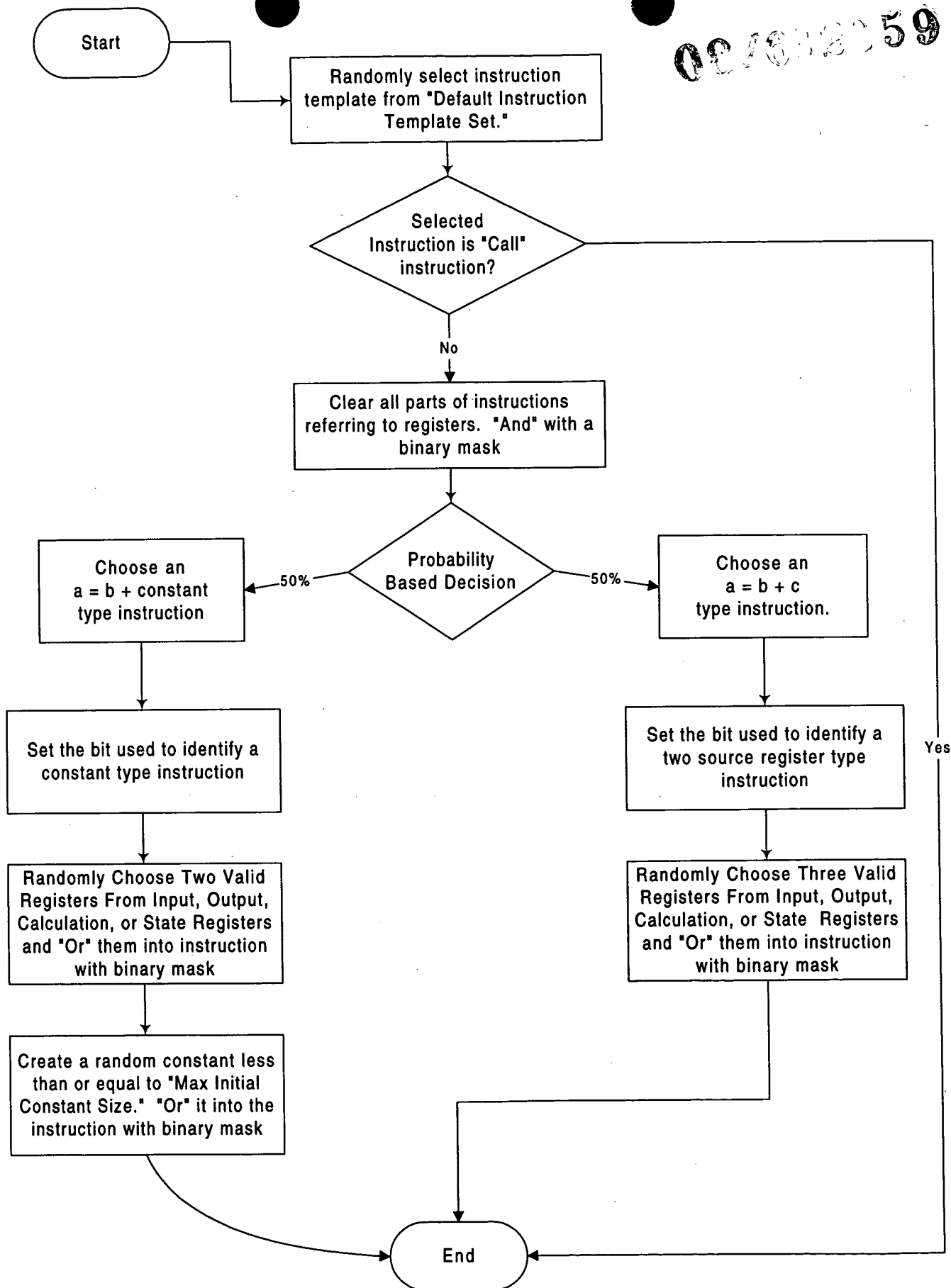


Figure 22e.

08/632859

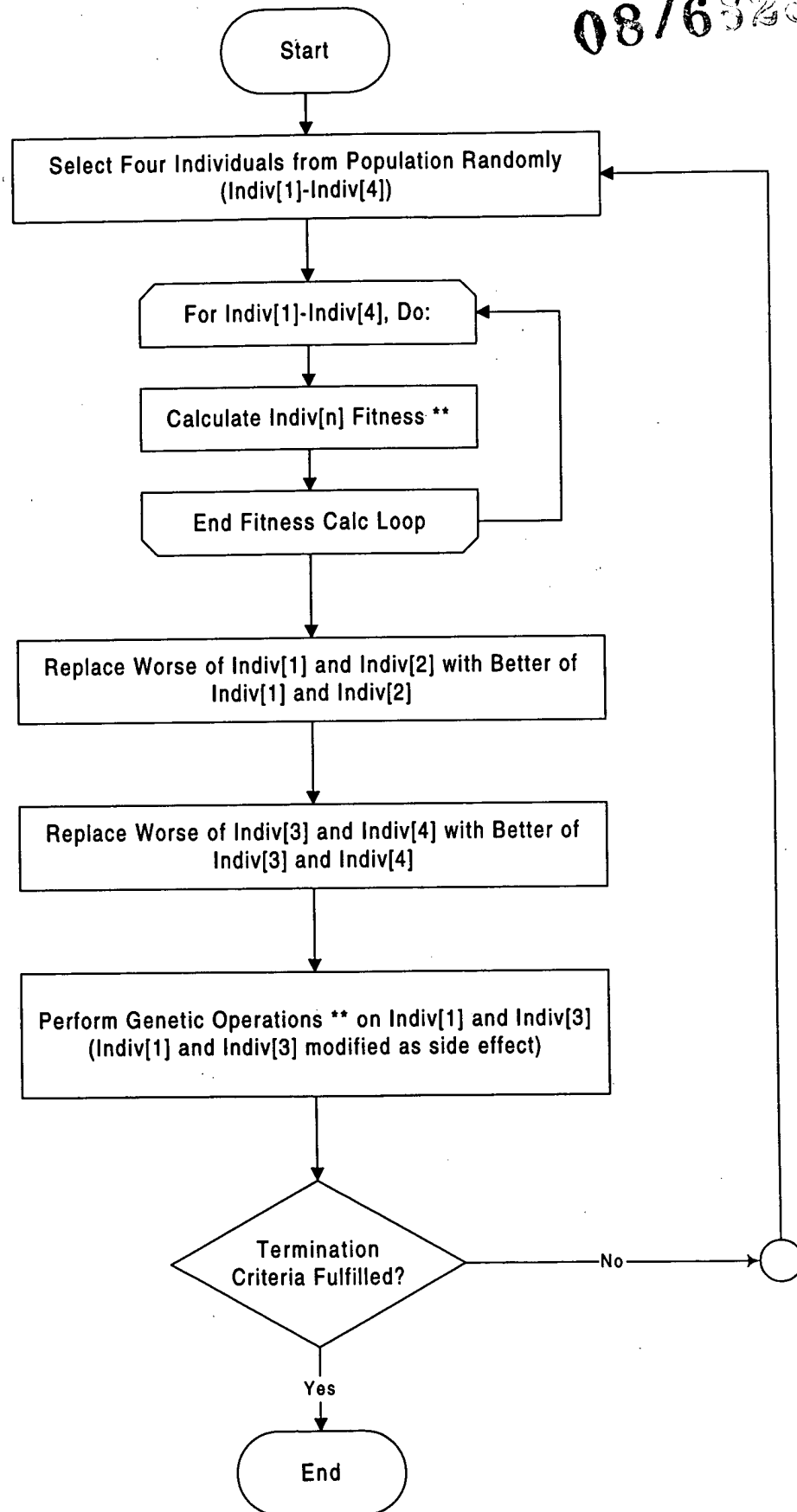


Figure 22f

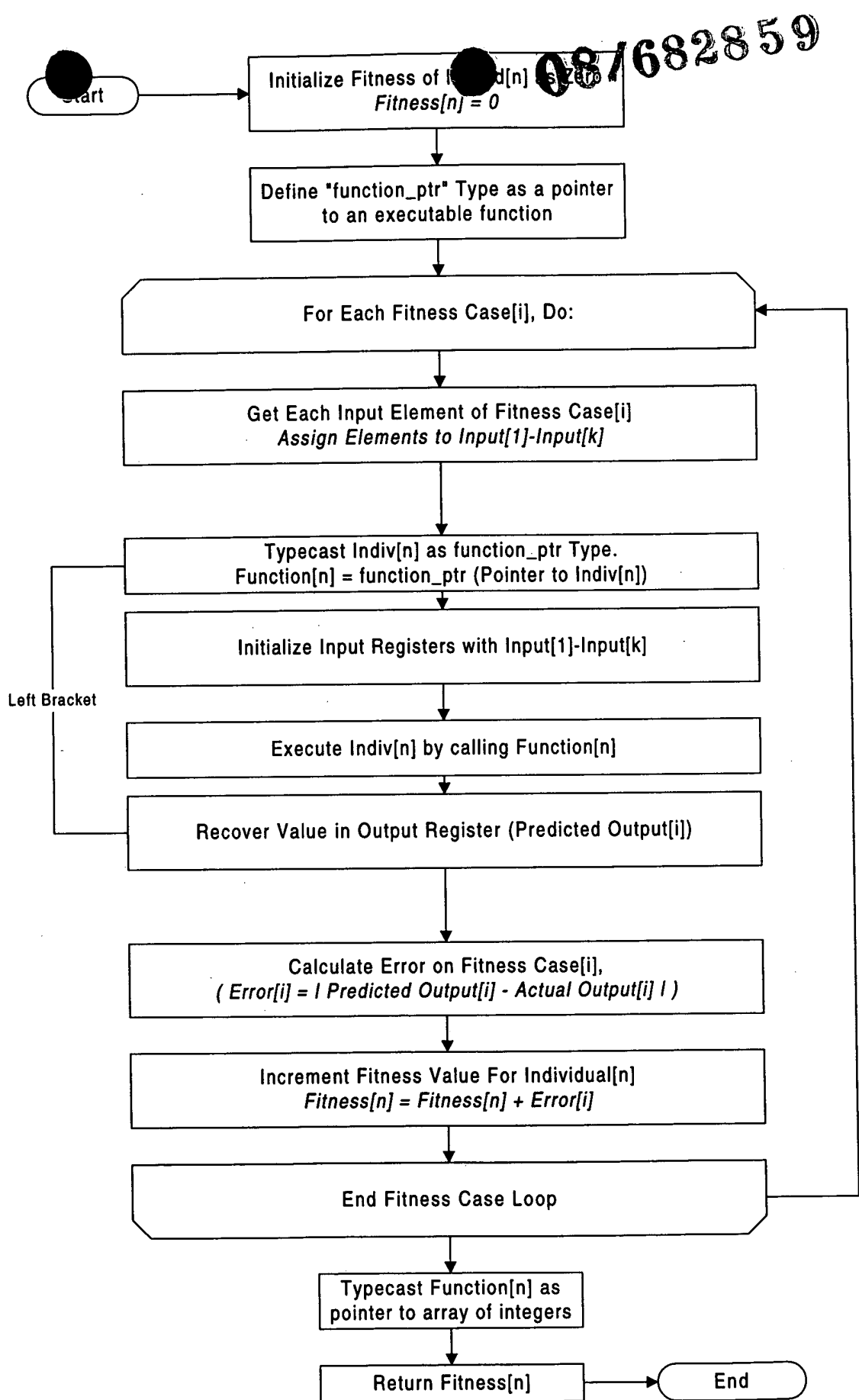


Figure 22g

08/632859

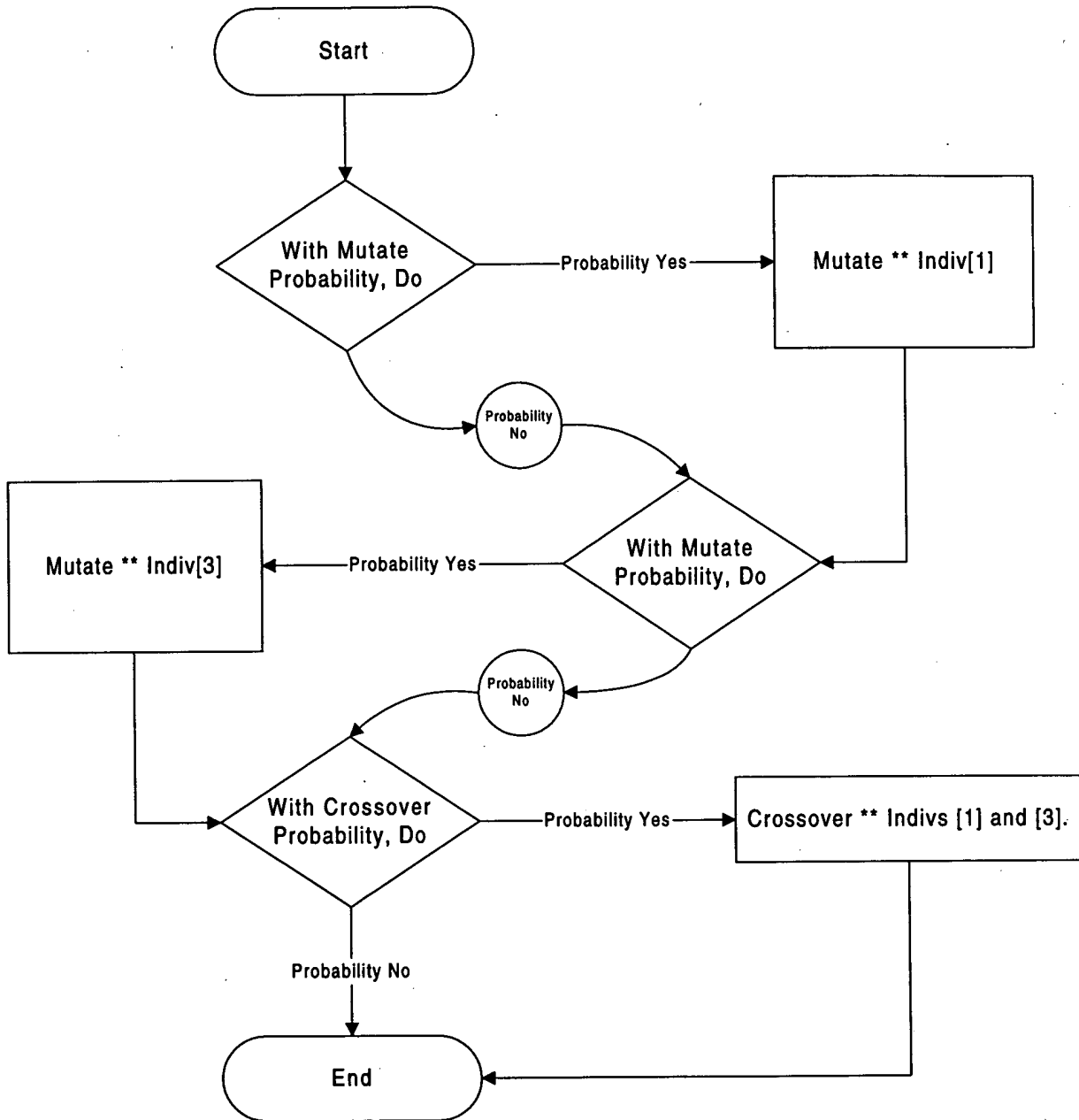


Figure 22h

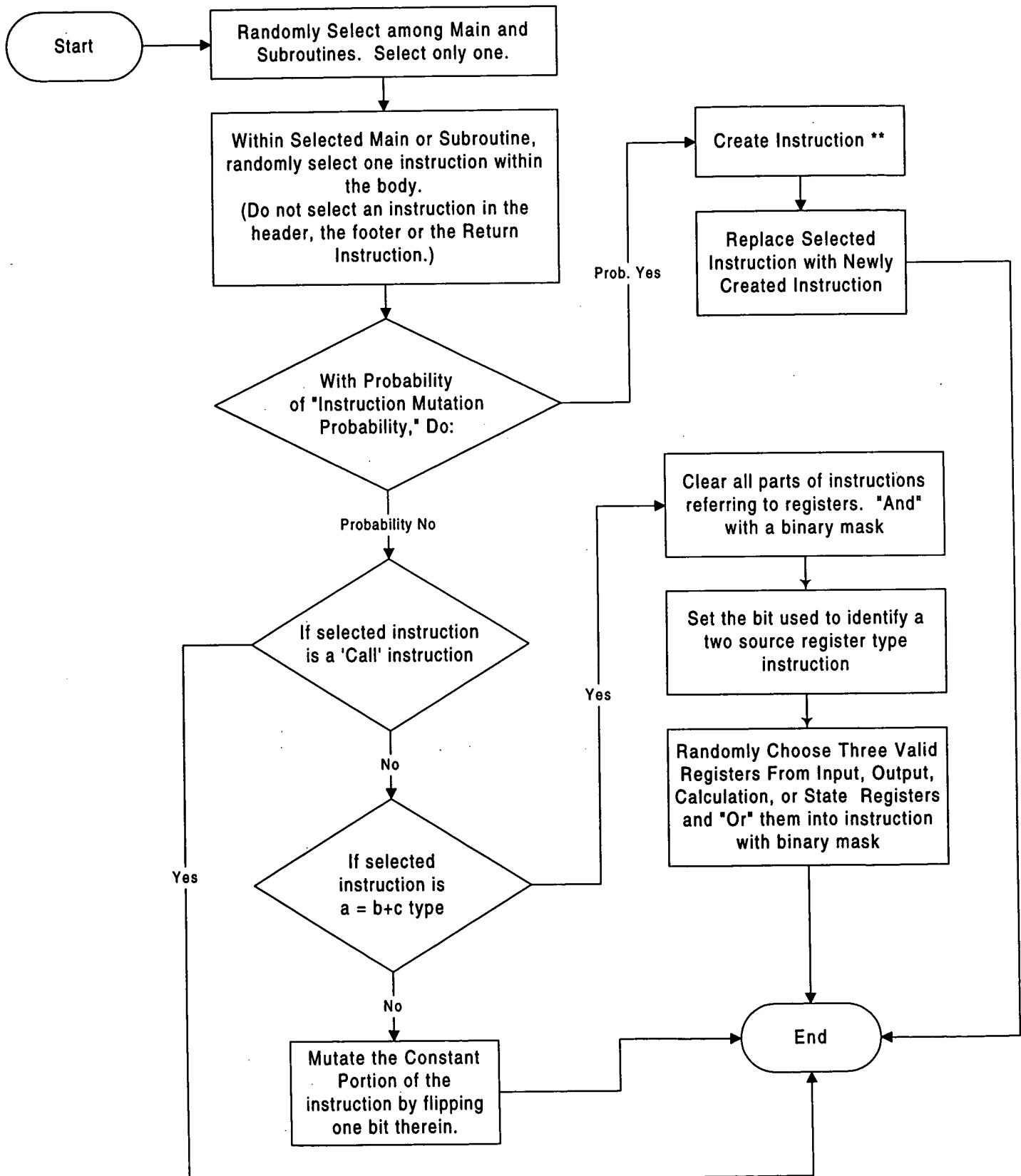


Figure 22i

08/02/85

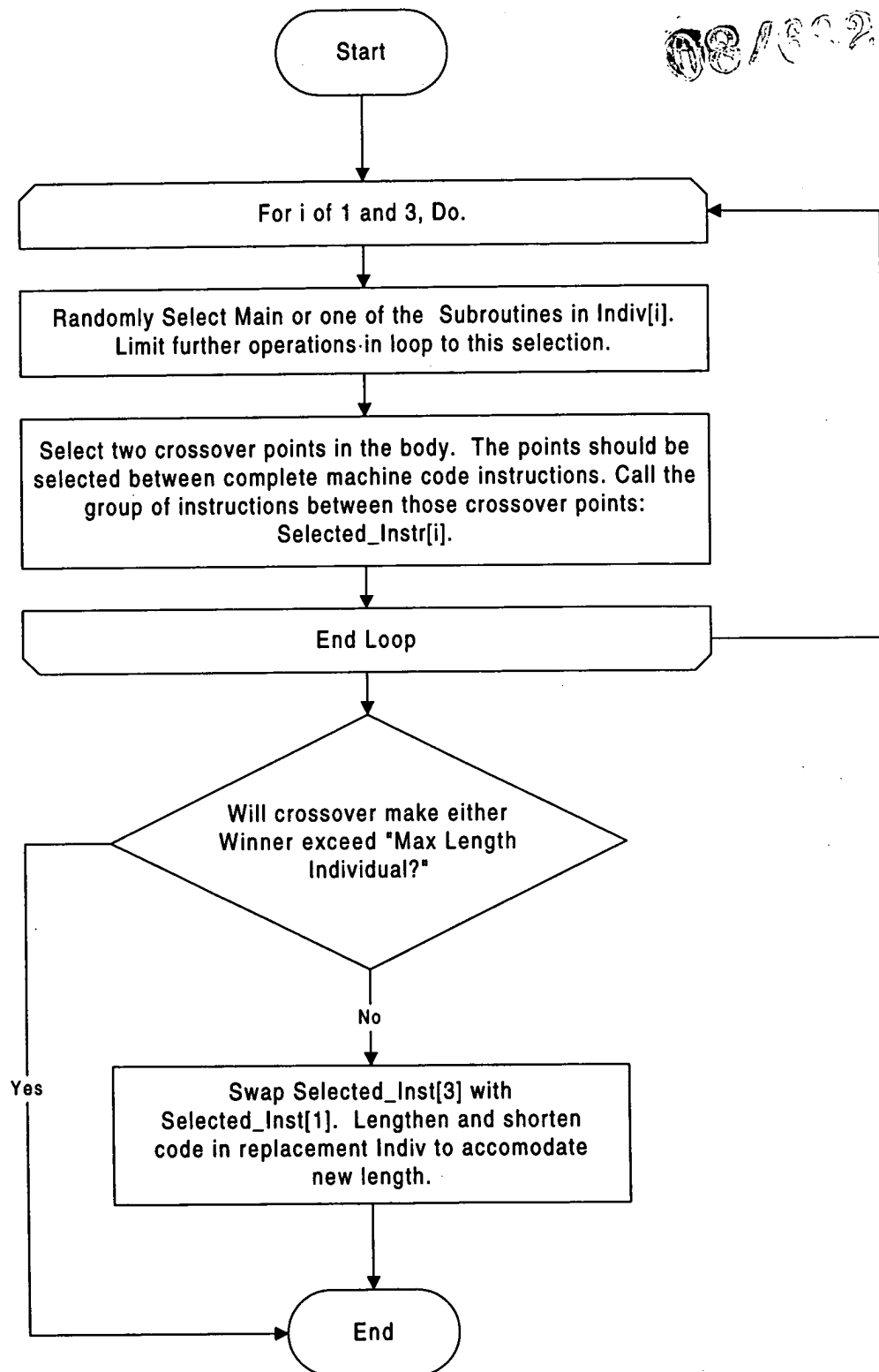


Figure 22j

08/682859

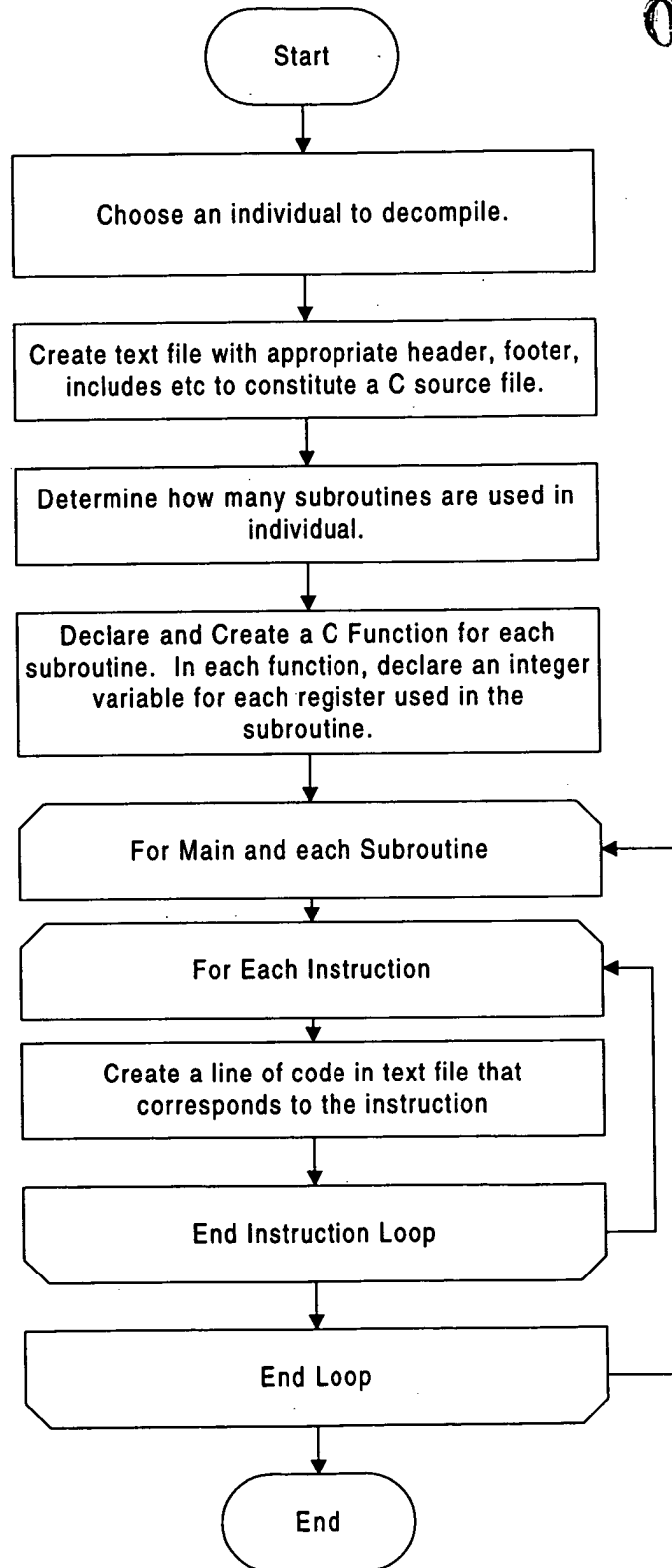


Figure 22k